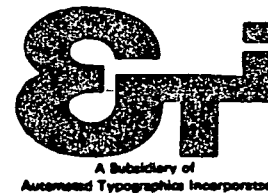


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A FINAL REPORT
ON THE DESIGN, DEVELOPMENT, AND PRESENTATION
OF A PILOT SEMINAR
CALLED
TECHNOLOGY AND OPPORTUNITY:
A NEW APPROACH FOR MINORITY BUSINESS

Submitted to:
National Aeronautics and Space Administration
Washington, D.C. 20546

Work performed pursuant to the terms
and conditions of Contract No. NASW-2642



June 24, 1974

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I. INTRODUCTION

A. Interagency Agreement

The pilot Technology Transfer Seminar was made possible under the terms of an agreement between the National Aeronautics and Space Administration and the Office of Minority Business Enterprise, Department of Commerce, dated April 16, 1974. The purpose of the agreement was, in part, that the two agencies "will develop and conduct a seminar program at which NASA will make available types of new technology which have commercial applications. NASA and OMBE will then transfer to the minority community suitable technology, which, when coupled with OMBE's delivery system, can assist in developing marketable products."

B. Expectations

The joint planning carried out as the result of the agreement was based on the assumption that if technology with commercial development potential were matched with minority manufacturers with development, production, and marketing capabilities (or at least one of these capabilities) the result would be a concrete contribution to the minority enterprise effort. It was recognized by the planning group that the Federal effort too often consisted of encouragement, coordination, and public statements. It was intended that the pilot seminar should be a low-profile occasion which emphasized results rather than promises.

NASA was to compile a list of technology items with the greatest commercial development potential, and OMBE was to search for minority manufacturing

capability in the region including the selected seminar site in Washington, D.C. Both NASA and OMBE were to make every effort to involve NASA prime contractors and other large majority firms directly in seminar activities.

NASA and OMBE agreed that the seminar should achieve two overall goals: the transfer of specific technology items to minority manufacturers; and the opening up of contract opportunities with NASA and subcontract opportunities with majority firms.

II. CONTRACTUAL OBLIGATIONS

A. Summary of Work Statement

The statement of work in the original contract called for the design, development, and presentation of one pilot seminar addressed to certain stated goals and consisting of a two-day session with approximately fifty participants at a site to be selected by the NASA-OMBE joint planning committee.

As contractors, Evaluation Technologies, Inc. was to perform several specified development activities as follows: survey of materials and policies of both agencies to select seminar program materials; preparation of a detailed draft program agenda; selection and invitation of speakers; site evaluation and arrangements; selection and invitation of participants; preparation of any necessary additional seminar program materials; management of seminar; measurement of seminar effectiveness; and preparation of a final report.

The statement of work in the contract modification called for two additional tasks: the conceptualization, development, production and insertion of one full-page, four-color advertisement in the June 1974 issue of Black Enterprise; and the conceptualization, development, production, installation, and dismantling of one three-dimensional display or exhibit for use both at the seminar and in convention settings.

B. Deliverables

Deliverable products or items under the terms of the contract and the

contract modification were as follows:

1. Detailed draft program agenda
2. Written invitation to participants
3. Seminar program materials
4. Final report
5. Camera-ready art for Black Enterprise
6. Three-dimensional display or exhibit

III. TASKS/RESPONSIBILITIES

The lists which follow detail the activities of the contractor, the NASA-OMBE planning group, and the seminar staff and resource people performed during the life of the contract. Included are tasks which were not specified in either the original contract or the modification but which were nonetheless carried out. All tasks were performed subject to approval by NASA's COTR.

A. Pre-Seminar Tasks

<u>Task</u>	<u>Responsible Organization</u>	<u>Responsible Person</u>
1. Determination of site selection criteria	NASA	Monroe
2. Selection of site	NASA	Monroe
3. Selection of seminar dates	NASA	Monroe
4. Selection of technology transfer items	NASA	Hayes
5. Selection of participants	OMBE	Williams
6. Determination of seminar objectives	NASA, OMBE	Monroe, Williams
7. Determination of motel selection criteria	NASA	Monroe
8. Survey of available motels	ETI	Johnson
9. Selection of motel	ETI	Johnson
10. Preliminary motel arrangements	ETI	Johnson
11. Selection of business and trade associations for briefing	NASA, OMBE	Hayes, Williams

<u>Task</u>	<u>Responsible Organization</u>	<u>Responsible Person</u>
12. Preparation of agenda for briefing	ETI	Thompson
13. Preparation of speeches for signing of interagency agreement	ETI	Thompson
14. Determination of selection criteria for speakers	NASA	Monroe
15. Conduct of briefing	NASA	Hayes
16. Selection of speakers	NASA	Monroe
17. Preparation of invitation letters to speakers	ETI	Thompson
18. Mailing of letters to speakers	ETI	Johnson
19. Preparation of talking paper for seminar design	ETI	Walker
20. Determination of seminar content and structure	NASA, OMBE	Monroe, Williams
21. Preparation of draft program agenda	ETI	Thompson
22. Selection of substitute speakers	NASA	Monroe
23. Conceptualization and design of ad	ETI	Thompson
24. Subcontract arrangements for production of ad	ETI	Johnson
25. Production of ad comprehensives	ETI, Domus	Johnson, Belfiore
26. Revision of ad	ETI, Domus	Johnson, Belfiore
27. Production of ad camera-ready copy	ETI, Domus	Johnson, Belfiore
28. Insertion of ad	ETI	Johnson
29. Detailed motel arrangements	ETI	Johnson
30. Compilation of mailing list	ETI	Johnson

<u>Task</u>	<u>Responsible Organization</u>	<u>Responsible Person</u>
31. Preparation of invitation letter to participants	ETI	Thompson
32. Preparation of form letter to answer inquiries	ETI	Thompson
33. Preparation of seminar fact sheet	ETI	Johnson
34. Preparation of mailer for participants	ETI	Thompson
35. Mailing of invitation materials to participants	ETI	Johnson
36. Subcontract arrangement for seminar packet covers	ETI	Johnson
37. Subcontract arrangement for product of exhibit	ETI	Johnson
38. Production of packet covers	ETI, Domus	Johnson, Belfiore
39. Production of exhibit	ETI, Domus	Johnson, Belfiore
40.. Preparation of invitation letters to resource people	ETI	Thompson
41. Coordination with industry resource people	ETI	Johnson
42. Selection of NASA seminar program staff	NASA	Hayes
43. Selection of OMBE seminar program staff	OMBE	Williams
44. Revision of program agenda	ETI	Thompson
45. Briefing of key NASA and OMBE seminar program staff	NASA	Hayes
46. Selection of NASA seminar program materials	NASA	Orrick
47. Selection of OMBE seminar program materials	OMBE	Williams
48. Assembly of program materials in packets	ETI	Johnson

<u>Task</u>	<u>Responsible Organization</u>	<u>Responsible Person</u>
49. Monitoring of participant responses to invitations	ETI	Johnson
50. Follow-up telephone calls to invited participants	ETI	Johnson
51. Design of seminar registration procedures and forms	ETI	Johnson
52. Production of registration forms	ETI	Johnson
53. Briefing of registration staff	ETI	Johnson
54. Monitoring of participants motel reservations	ETI	Johnson
55. Preparation of site information signs	ETI	Johnson
56. Final site arrangements	ETI	Johnson
57. Design of evaluation system	ETI	Thompson
58. Preparation of evaluation instruments	ETI	Thompson
59. Briefing and rehearsal of program staff	NASA	Monroe
60. Assignment of workshop coordinators	NASA	Monroe
61.. Preparation of final program agenda	ETI	Thompson
62. Production of agenda	ETI	Johnson
63. Installation of exhibit	Domus	Belfiore
64. Delivery of program materials	ETI	Johnson
65. Installation of signs	ETI	Johnson
66. Set up of information center	NASA	Orrick
67. Installation of RECON centers	NASA	Chenery
68. Delivery of supplies and equipment	ETI	Johnson
69. Installation of taping equipment	ETI	Johnson

B. Seminar Tasks

<u>Tasks</u>	<u>Responsible Organization</u>	<u>Responsible Person</u>
1. Conduct of registration	ETI	Johnson
2. Preparation of complete attendance roster	ETI	Johnson
3. Operation of information Center	NASA	Orrick
4. Operation of RECON centers	NASA	Chenery
5. Handling of administrative matters	ETI	Johnson
6. Taping of general sessions	ETI	Johnson
7. Summaries of workshops	ETI	Thompson
8. Collection of workshop presentation materials	ETI	Johnson
9. Maintenance of seminar proceedings	NASA	Allen
10. Coordination of workshops	NASA	Monroe
11. Supervision of social hour	ETI	Johnson
12. Maintenance of hospitality suite	ETI	Johnson
13. Administration of participant questionnaires	ETI	Johnson
14. Conduct of participant interviews	ETI	Thompson
15. Supervision of observers	ETI	Thompson
16. Supervision of food service	ETI	Johnson

C. Post Seminar Tasks

1. Preparation of seminar highlights	ETI	Thompson
2. Handling and analysis of evaluation data	ETI	Thompson

<u>Tasks</u>	<u>Responsible Organization</u>	<u>Responsible Person</u>
3. Collection of additional presentation materials	ETI	Johnson
4. Delivery of highlights	ETI	Johnson
5. Transcription of taped sessions	ETI	Thompson
6. Editing of transcriptions	ETI	Thompson
7. Preparation of courtesy letters to speakers	ETI	Thompson
8. Preparation of courtesy letters to staff and resource people	ETI	Thompson
9. Mailing of courtesy letters	ETI	Johnson
10. Preparation of final report	ETI	Thompson
11. Distribution of report and other materials	NASA, ETI	Monroe, Johnson
12. Delivery of final report	ETI	Johnson

IV. SEMINAR HIGHLIGHTS

A. Participation

Registration for the pilot seminar totalled 96. Of this number, 37 participants represented minority manufacturers and service companies, minority consulting firms, minority colleges or universities, and minority associations and organizations, including OMBE-funded organizations.

Speakers at the seminar representing NASA were Dr. Dudley McConnell, Assistant Administrator for Equal Opportunity Programs, and Mr. George J. Vecchietti, Assistant Administrator for Procurement. OMBE was represented by its Director, Alex Armendaris. Congressman Parren Mitchell addressed the opening session on Tuesday; the luncheon speaker was Barry Johnson, Past Chairman of the Board of Directors of the National Association of Black Manufacturers (NABM). Wednesday's luncheon featured Rick Bela, General Counsel for the Latin American Manufacturers Association.

Staff and resource people for the workshops were drawn from NASA, both its headquarters and its other facilities around the country, as well as from OMBE's headquarters and regional offices. Additional support was provided by representatives from Rockwell International, Sears, and Martin-Marietta. Chairman of the seminar was Harrison Allen, Jr., Technology Utilization Engineer from NASA's Lewis Research Center in Cleveland, Ohio.

B. Speaker: Congressman Parren Mitchell

Congressman Mitchell began by remarking that it was a "propitious time for this seminar" because of an "emasculatation" of programs designed to assist minorities. He referred to a recent meeting between NABM and Vice President Gerald Ford. Though the Vice President said, in answer to a question, that there is a commitment to minorities, the fact that he had to be asked, in Mitchell's opinion, is a measure of the present climate.

Mitchell asked the seminar participants to carry several messages to the minority business community. The first caveat, as he termed them, was not to make the "tragic mistake" of underselling themselves. In his view, minority businesses are operating at no more than twenty percent of capacity. The second message or caveat was not to fear consortium arrangements. Although minority businessmen have an "unreasoning fear" of consortiums, it is a traditional, effective way of doing business. The third caveat for the minority business community was not to fear being "an aggressive advocate in aggressive pursuit of contracts."

Congressman Mitchell also had several caveats for Government and the private sector. First, subcontracting with minority firms will only happen if top management in the private sector is firmly behind it and if NASA, for example, insists on this high-level commitment from majority corporations. Second, Government agencies should not use the 8(a) set-aside program as a restriction on minority contractors. On the other hand, Mitchell said, it is unfair for minority business to have to compete on an equal basis with long-established majority firms. A third caveat was that NASA should insist on its prime contractors' setting up incentive programs for their procurement people so that aggressive promotion of minority contracting programs is rewarded. The fourth and final caveat for Government and the private sector was that agencies must insist on "clear-cut goals for minority enterprise." By this, Mitchell meant, goals which are a commitment, for example, to a percentage increase in minority contracts or an increase in the number of marketing areas in which minority contracts are let.

In conclusion, Congressman Mitchell said: "I think this is great. I think this seminar will go. And I hope it will go so well that it can be duplicated all over the country." Though he said he felt "awfully pessimistic" about the present climate in which minority business operates, he believed that a seminar such as the one he was addressing could assist in a "revitalization of a commitment."

C. Speaker: Barry Johnson

Mr. Johnson's remarks consisted of some observations based on his experience as Chairman of the Board of NABM for three years. His observations illustrated the belief, as he put it, that minority business may be the "Achilles heel of America." He asserted that, for the most part, the major white corporations run the country and that "white corporate America has yet to stand up and declare that it will do its part in making the American dream a reality for all Americans."

Johnson used some sections from a paper delivered at a recent NABM convention in Chicago. Entitled "The Phenomena of the Disappearing Market," it was delivered by Benjamin Duster, President of a MESBIC in Chicago. The market is that of the corporate community; the seller, the minority supplier. The basic assumption about this market, in Duster's analysis, is that if a minority supplier has demonstrated motivation and perseverance, has produced quality goods or services, and has received MESBIC financing, he will be a success. In Duster's words, "the pursuit of that mythical market has been a major factor in the poor performance of many MESBIC portfolio companies."

What the commitment from majority corporations has meant, Johnson said, is orders for 12 pencils instead of 12 desks, 50 pounds of freight instead of 500, 5000 stampings instead of 50,000, and the like. The explanation for this token performance on the part of majority companies, in Duster's view, is that "it is the height of naiveté to believe they will ever willingly award a meaningful, profitable contract to a minority businessman, because the businessman's gross profit might equal the purchasing agent's salary." As a result, minority suppliers "have been reduced to space-age sharecroppers, never profitable and always looking to a better crop of sales next year."

Another of Johnson's observations was that "the dollar is the basis - the real basis - for everything that occurs in our lives; and it is the exclusion from participation in the system or participation in the cash flow - the opportunity to capture or control our share of these dollars - that frustrates millions of minority Americans and prevents any real success in solving our problems." Johnson continued by saying: "As a black manufacturer and an American, I am dedicated to forcing - and, yes, I mean forcing - the economic system that we all love so dearly to let us in."

Describing the agency as a "future building block of this country," Johnson said that NASA could do several things to assist minority business. The first thing was that NASA could make sure that minority business got a fair share - "significant portions," "profitable portions" - of the large space shuttle contract awarded to Rockwell International. A second thing was that NASA and its prime and sub contractors could help strengthen minority banks by channeling deposits to them.

Referring to the fact that both Congressman Mitchell and the NABM had criticized OMBE in the past, Johnson said that "they have not been performing." He went on to assert: "This is not to say that as manufacturers we're against OMBE; but it is to say that we intend to see that we become successful businessmen and, in turn, make our communities successful."

"In conclusion, I would like to challenge NASA to join with us in really building a strong, an economically strong minority population in this country. We need your assistance."

D. Speaker: Rick Bela

After acknowledging the assistance LAMA has received from NABM in getting started, Mr. Bela described the strategy which LAMA has developed

to penetrate the aerospace industry as well as his own personal experience in working for equal opportunity for minorities. Listing several programs for minorities, he remarked that the Technology Transfer seminar was but the last of many, adding that "there's been a great deal of programs and yet very few solutions, because probably we wouldn't be here today if any one of those five or six I mentioned had really done their job." Of the present seminar, he said: "I think that perhaps, perhaps this is going to be different."

During eight years in Washington, Bela said he had seen minority programs change from the emphasis in the Johnson administration on providing services to the "new emphasis" in the Nixon administration on increasing "income potential" so as to enable minority individuals to buy needed services. But, he said, although Spanish-speaking people believed the election promises, "our community feels, to a large extent, betrayed by this administration."

The main body of Bela's comments was an exploration of three areas of the minority enterprise effort: OMBE, the Government's 8(a) program, and private industry's minority business enterprise program. Although he believed that OMBE has done "a tremendous job" considering "what they have to work with," it has not carried out its mandate as an advocate for minority business. He said that "until such time as this agency becomes truly an advocate within the administration for the minority businessman, then . . . everything else that it is doing has to be judged with that in the balance."

Although he believed that the Government's 8(a) set-aside program, administered by SBA, was useful in allowing the creation of minority consulting companies, he remarked on the cutbacks in the program after the election and the high rate of failure in the past year of such small firms.

In dealing with private industry's minority programs, Bela used the example of a company he and some friends bought into. They selected aerospace as the area to enter and put together a combination of high technology skills and proven capability, a combination apparently needed for a small minority firm to be successful. After one year of marketing, he explained, the company had one contract with an aerospace corporation. The contract, for \$50,000, represented only a fourth of total sales for the year. The other contracts were with firms for which his company's status as a minority business would have been a disadvantage.

This analysis of his recent personal business experience led Bela to remark that being a minority business enterprise was more often a limitation than an advantage. An experience a few days before at the NASA-funded Jet Propulsion Laboratories was typical, in his view: referral to a minority business enterprise officer, listing in a directory, and an opportunity to bid. Bela remarked: "Well, gentlemen, I don't have to be a Chicano to get an opportunity to bid." Because of the expense in relation to gross sales, "an opportunity to bid for a minority business enterprise is essentially an opportunity to go broke."

Only a "major effort" by Government, if necessary a subsidy program, can produce business in place of opportunity. LAMA has been considering strategies for changing the minority programs of private industry; and Bela discussed these. One possibility is set-aside programs. These would require some bending of Government procurement regulations, but it could be done if industry were willing. Another is R and D contracts, which by their nature allow more flexibility in the application of regulations. A third suggested possibility is using associations such as LAMA as prime contractors and allowing the association to match requirements with member capabilities.

In any case, Bela argued, more money should go to the minority businessman, who has the most to gain or lose, rather than to Government

or private industry to increase their personnel promoting the minority enterprise effort. He particularly warned against the use of goals and quotas, objecting to it as he did to set-asides: "All of us fear any kind of quota system. It's a sword that cuts both ways." In the area of equal employment, he reminded the audience, quotas failed to assure progress. Only lawsuits were finally effective; and though the same strategy might some day be used in the minority enterprise effort, he did not see it as viable for several years yet.

To the arguments against subsidizing the development of minority business, Bela pointed out that majority aerospace companies are already subsidized: in their bidding for Government contracts if they already are performing on other Government contracts and in the fact that such companies receive set-asides in the sense that original NASA contractors are still receiving agency contracts.

Out of frustration and using tactics developed in the civil rights movement, LAMA, Bela explained, selected NASA as the Government agency to concentrate on. Partly this was due to the fact that the legislation authorizing the space shuttle project promised social and economic payoffs and majority companies bidding on it - including Rockwell International, who won the award - agreed to implement these payoffs. He said of the Spanish-speaking community that "we feel that we have, by right - a Congressional right - and by commitment of this administration, a stake in NASA and the space shuttle program."

In conclusion, Bela said that he felt it was best for LAMA to exploit a new area of development like that of technology transfer but that to do so NASA must offer a "total opportunity," not just an opportunity to bid. "If we are talking seriously about developing a strong business and industrial minority base in the minority community, then we come back to the very same issue that the money has to be spent, the commitment has to be made, first by the Government, and the Government must enforce it on private industry."

E. Workshops 1 and 2: The NASA TU
Program - An Overview

Peter Chenery, of the RDC at Triangle Research Park in North Carolina, described the publications and services provided by an RDC. The latter include retrospective searches by client request, referral services to needed experts and special materials, applications engineering, workshops and seminars to disseminate information and offer training, and complete copies of documents identified in searches. What the RDC program provides is a single access point to \$40 billion of space research for a modest fee. Chenery answered a variety of questions, from the amount of search fees to the availability of proven management techniques.

Gayle Parker, a NASA Headquarters patent licensing attorney, described three commercially licensed products as examples of exclusive and non-exclusive licenses and then went on to explain the rationale for the two types of licenses. He also detailed the licensing application procedure.

Chenery and Parker gave the same presentation to both workshops.

F. Workshop 3: NASA Marketing and Procurement

William Mathis, of NASA Headquarters procurement office, described the best business opportunities at NASA for minority firms and the way the agency makes its requirements known. He stressed the importance of such firms making their capabilities known to NASA so they can be assisted in marketing. He answered several questions on 8(a) awards and marketing at NASA.

Arthur Wolter of NASA described the functions of the Industry Assistance Office and the importance of minority firms making their

capabilities known to that office so they can be matched with the requirements generated by more than 2500 technical people at NASA.

Robert Della Valle, of NASA Headquarters procurement office, explained what a proposal should tell NASA about a company, why a particular company is awarded a contract (essentially, if NASA is familiar with its capabilities and history, it will have confidence in its proposal), what happens at a pre-bidders conference, and how NASA evaluates proposals.

Charlotte Spann, of NASA Headquarters procurement office, discussed unsolicited proposals, emphasizing that they are the principal means by which organizations and companies bring their research ideas and projects into the agency for consideration.

G. Workshop 4: OMBE Marketing
and Technical Assistance

Robert Sewall, Technical Support Officer from OMBE's Regional Office, described the work of the Government Procurement Division in obtaining minority participation in Federal contracting. He also listed several agencies with which OMBE has worked out agreements for minority contract awards.

Joseph Dixon, Private Procurement Officer from OMBE's Regional Office, described the various kinds of OMBE-funded organizations and explained the management, financial, technical, and marketing assistance they provide to minority entrepreneurs.

The Executive Director of the Washington Council for Equal Business Opportunity, an OMBE-funded organization, Joseph Jackson, said that a major obstacle for minority individuals in putting together a business package is front-end capital. He felt that pending legislation to establish a development bank might help to alleviate this financing problem. Richard Hykes, Marketing Director of the Metropolitan Washington Business Resource Center, also an OMBE-funded organization, explained the functions of a BRC: marketing, technical assistance, and financing.

H. Workshop 5: Private Sector
Marketing and Procurement

The first of the Rockwell International representatives, Bud Goldstone, an aerospace engineer from the Downey, California plant, described the many innovations coming out of the work on the space shuttle orbiter which will be available for commercial exploitation. In answering questions, he explained that Rockwell was contractually obligated to report all such innovations to NASA, which, in turn, would publish them through the TU program. It was to NASA that minority businesses should go for information on this new technology.

The other representative, Sy Gottlieb, explained Rockwell's procurement policies for minority firms. Every division of Rockwell has a minority-business administrator whose responsibilities range from looking for capability to providing technical assistance. Gottlieb advised minority businessmen to be both thoughtful and aggressive in the area of marketing, learning the market targeted for exploration, making themselves known by personal contact and good advertising, and always having something specific to offer an engineer or buyer. He answered a number of questions on how minority businesses should deal with the corporate community.

Vern Brett, of Martin-Marietta, emphasized the importance of marketing for minority firms, recommending that they persist in follow-up calls and that several firms could reduce marketing expense by sharing a single sales representative.

Elmer Koltai, Minority Source Coordinator for Sears in New York City, described an opportunity for a minority business as the result of bringing together an idea from the businessman; OMBE's assistance in making the idea into a saleable product; evaluation of price, quality, and potential by Sears' product engineers; and consideration by Sears' buyers.

Meyer Marks, a product engineer from Sears' Chicago office, said that his company has more than 200 engineers and consultants who evaluate new product ideas. He advised the seminar participants to come to him with any idea and if the idea sounded good he would bring the businessman and Sears' buyer together. Marks answered several questions on Sears' practices relative to new product development.

I. Closing General Session

Charles Kubokawa, NASA scientist at Ames Research Center, gave a presentation on the Kuku Fastener, which he invented and which is described in NASA Tech Brief 70 - 10509 Easy Insert, Easy Release Toggle Bolt Fastener.

Jeffery Hamilton, NASA's Director of Technology Utilization, announced that commercial development and marketing of the fastener would be supported by means of an RFP shortly to be released and limited to 8(a) certified firms.

V. SEMINAR EFFECTIVENESS

A. Effectiveness Measures

In order to determine the impact of the seminar, several effectiveness measures were used. These included the achievement of stated workshop objectives for participants, the facility with which the seminar was managed, and the convenience of the site used. The achievement of objectives required a yes/no response; the other two measures, response to rating scales. In addition, comments were solicited.

Three instruments were used: Participant Questionnaire, Participant Interview, and Observer Questionnaire. (See Appendix F for samples of instruments.) These instruments were approved by NASA prior to being used.

B. Analysis

Responses to the participant questionnaire were received from 12 of the 37 participants representing minority consulting firms, minority colleges or universities, and minority associations and organizations. Six of these participants were interviewed, and three observers reported their reactions to all or some of the sessions. It should be noted that some participants did not attend the second day when evaluation was conducted.

Both participants and observers agreed that workshops achieved their objectives (as stated in the program agenda). On only one objective was opinion divided: in answer to the question, "Do you know how NASA identifies sources for contracting capability?" seven participants said yes and five said no.

Several positive comments were recorded: "The very best part of the seminar is the opportunity for small and big business to make a marriage on specific items." "Workshop 5 was the best - Bud Goldstone and Sy Gottlieb

outstanding." Some useful criticisms were also received: "...while all the advice on how to do business with Government and industry was good, it all costs money -- the one thing any small business has little of." "Develop conference more logically in future. Begin with technology possibilities -- Bud Goldstone. Then Workshops 1 and 2, etc." "Include sessions on finance, management, marketing problems of minority manufacturers. How can large contractors help, e.g., with material supplies that are in short supply."

Participants and observers again agreed that the seminar was well managed. On only one point was participant opinion divided: six said that the seminar was "carefully" planned; five, that it was "adequately" planned. A positive comment was as follows: "Seminar chairman excellent, almost all speakers were well chosen." Observers contributed useful criticisms: "Seminar somewhat lengthy and possibly too many speakers." "No Spanish-surnamed companies represented."

In response to most items on site conditions/facilities, participants found that accommodations and services were about what they were used to elsewhere. One participant expressed the hope that the seminar could be presented in the Midwest (meaning the Federal region including Iowa, Missouri, Kansas, and Nebraska).

In the participant interviews, individuals contributed remarks worthy of recording. Patent licensing was mentioned as being "of specific and practical use" to a participant's business. A representative from a university said that information about NASA activities would be conveyed to technology students as a way of presenting entrepreneurship as an alternative career choice. Several individuals believed that NASA represented a new market for them or for businessmen they were assisting. OMBE was cited for its possible usefulness in developing sources of capital.

In response to an invitation to comment on whatever they chose, participants made a variety of remarks. One person thought that the seminars

should be held all over the country. Another believed that "off the cuff, hard tacks advice" is most useful to businessmen. Yet another expected more step-by-step information on how OMBE can help an individual start a business.

C. Conclusions

On the basis of the effectiveness measures used, participants and observers alike thought the seminar a success, useful to them in their businesses or in providing assistance to businessmen, though in need of improvement in some areas.

D. Summary of Data

The following tables summarize data collected on Participant Questionnaire and Observer Questionnaire.

PARTICIPANT QUESTIONNAIRE

I. Achievement of Workshop Objectives

<u>Question</u>	<u>Yes</u>	<u>No</u>
1.	10	1
2.	11	0
3.	10	2
4.	11	0
5.	7	5
6.	9	1
7.	8	1
8.	8	1
9.	8	0
10.	9	2
11.	8	1
12.	6	0
13.	11	0
14.	8	2
15.	9	2

II. Seminar Management

1.	Convenient	8
	Acceptable	3
	Inconvenient	0
2.	Useful	9
	Useless	0
	Irrelevant	0
3.	Informative	10
	Not informative	0
	Irrelevant	0
4.*	Workshops 1	
	and 2	6
	3	2
	4	0
	5	3

* Since some respondents marked several workshops instead of the one "most helpful," the results on this question are invalid.

5.	Easily	9
	Only if I kept asking questions	1
	With great difficulty	1
	Not all all	0
6.	Well informed	9
	Not very well informed	0
	No better informed than I was	0

7.	Easily	8
	Only if I kept asking for a meeting	0
	With great difficulty	1
	Not at all	0
8.	Carefully	6
	Adequately	5
	Poorly	0

III. Site Conditions/Facilities

1.	With no problems	6
	With minor problems	0
	At great inconvenience to me	0
2.	Unusually clean and com- fortable	2
	About what I am used to	4
	Less clean and comfortable than I am used to	0
3.	Unusually good	3
	Adequate	6
	Poor	0
4.	Most of what I wanted/needed	8
	Very little of what I wanted/ needed	2
	Nothing of what I wanted/ needed	0
5.	Better than what I am used to at motels	1
	About the same as most motels	6
	Unusually poor by comparison with other motels	1

OBSERVER QUESTIONNAIRE

I. Achievement of Workshop Objectives

Question	<u>Yes</u>	<u>No</u>
1.	3	0
2.	3	0
3.	3	0
4.	3	0
5.	3	0
6.	2	1
7.	2	1

8.	2	0
9.	2	0
10.	2	0
11.	2	0
12.	2	0

II. Seminar Management

1.	Convenient	3
	Acceptable	0
	Inconvenient	0
2.	Useful	3
	Useless	0
	Irrelevant	0
3.	Informative	3
	Not informative	0
	Irrelevant	0
4.	Workshops 1 and 2	0
	3	2
	4	1
	5	0
5.	Easily	2
	Only if they kept asking questions	1
	With great difficulty	0
	Not at all	0
6.	Well Informed	3
	Not very well informed	0
	No better informed than participants	0
7.	Easily	3
	Only if they kept asking for a meeting	0
	With great Difficulty	0
	Not at all	0
8.	Carefully	2
	Adequately	1
	Poorly	0

VI. FINDINGS AND RECOMMENDATIONS

A. Findings: Pilot Seminar

It is clear that the pilot seminar provided an occasion for minority businessmen and Government and majority firms to meet which should be replicated in other areas of the country. The scheduled activities were successful, according to the evaluation performed. The unscheduled activities - informal conversations, small conferences called as a result of participant interest and/or need, subsequent appointments set up - were equally successful, according to informal observations made by those involved in conducting the seminar. OMBE made a significant contribution to the seminar by arranging for the participation of industry representatives.

The accomplishment of purposeful meetings between individual minority businessmen and NASA staff and industry representatives is, in fact, the achievement of the stated goals for seminar participants. The seminar was, in the best sense, an occasion for NASA to demonstrate that minority business can "Look to Us."

B. Recommendations: Additional Seminars

Several recommendations are made with the purpose of improving the seminar when it is offered again.

1. Duration of Seminar

It is strongly recommended that the seminar be scheduled either for an evening and a full day or for a full day only. Neither the content nor the necessary scheduling of sessions justifies asking businessmen or educators to take two days out of their schedule in order to attend. In addition, maximum impact of the seminar in one day can be achieved by restructuring sessions to more nearly target on the specific needs of participants.

2. Program Content

Content of seminar workshops should continue to emphasize technology

transfer, contracting opportunities, and specific kinds of assistance from OMBE. Most of the overview and organizational matters relating to NASA and OMBE can be presented through appropriate and already existing agency publications.

3. Program Scheduling

Participant opinion supports the following order for workshops: first, a workshop on private sector marketing and procurement; and, second, a workshop on NASA marketing and procurement. NASA should also give serious thought to announcing any RFP at the very first general session of the seminar.

4. Workshop Presentations

It is strongly recommended that, assuming a one-day seminar (whether a prior evening session is scheduled or not), the afternoon NASA workshop should be structured so that NASA TU and procurement staff along with staff from OMBE-funded organizations present and guide discussions on the whole process from identification of technology items through requirements and contracting to business assistance such as financing. The morning private sector workshop should combine industry representatives and staff from OMBE-funded organizations in a similar approach to subcontracting. In both workshops, participants should be divided into small groups for more effective communication. It is further recommended that no formal presentations be used except in brief introductory remarks. A participant can absorb only so much, and his purpose in attending - to find new business opportunities - is better served in interchange with NASA and OMBE staff than in listening to formal remarks.

5. Speakers

If a one-day seminar is planned, obviously the number of speakers will need to be reduced. The mix of speakers in the pilot seminar seemed effective, and in general should set a pattern for future seminars. Adjustments should be made for the geographical area in which a seminar is held as well as for the kinds of participants invited.

6. Selection of Participants

The kinds of participants will vary by the location of the seminar

site. If a seminar were held in Atlanta, a number of minority colleges or universities should be invited. If held in Houston, selection of participants should be weighted towards Spanish-surnamed businessmen. Program content might need to be adjusted accordingly.

7. Evaluation

It was clearly observable at the pilot seminar that the most useful contacts between minority businessmen and NASA staff and industry representatives occurred outside the scheduled activities. It is therefore strongly recommended that a follow-up survey or surveys be used to capture some indication of the results of these informal contacts. It is further recommended that the participant questionnaire be shortened and that the participant interview be eliminated. Another recommendation is that the participant questionnaire be administered at a time and place set aside solely for the purpose of enabling participants to understand the purpose of the evaluation and to give a complete and thoughtful response. Yet another recommendation is that observers be drawn from a source other than that of NASA staff or the contractor's staff. A final recommendation is that each seminar proposed for FY '75 needs to be evaluated.

8. Suggested Schedule for FY '75

The following sites and times are recommended for the six seminars proposed for FY '75:

October 1974 - Atlanta, Georgia
November 1974 - Houston, Texas
February 1975 - Los Angeles, California
March 1975 - New Orleans, Louisiana
April 1975 - Boston, Massachusetts
May 1975 - Cleveland, Ohio

This recommended schedule is based on several assumptions: that the sites should be chosen on the basis both of NASA facility locations and of concentrations of minority manufacturers and colleges or universities; that the period from Thanksgiving to the first of February should not be used for conducting seminars but is a convenient time, after two additional seminars, for a cumulative evaluation; and that planning and development of the six

seminars, given necessary scheduling, will require simultaneous work on several sites.

9. Planning and Development Work for FY '75

In addition to the lead time required from contract start-up to the presentation of the first seminar in FY '75, planning and development work will need to be performed for several sites at the same time. This will mean for the contractor a different staffing pattern and for NASA and OMBE the assignment of sufficient personnel to carry out agency activities on a continuous basis. The plethora of activities required, as reflected in the historical record of tasks performed for the pilot seminar (and detailed in section III of this report), means constant control and monitoring in order for the additional seminars to be as successful as the pilot. The further considerations involved in using sites outside Washington are obvious enough and must be included in planning and development task checklists.

APPENDIXES

- A. Program agenda distributed at seminar
- B. Corrected program agenda
- C. Edited transcript of speeches at general sessions
- D. Materials used in workshop presentations
- E. Evaluation system design
- F. Evaluation instruments
- G. List of materials in seminar packets
- H. Roster of attendees

APPENDIX A: PROGRAM AGENDA DISTRIBUTED AT SEMINAR

TECHNOLOGY AND OPPORTUNITY
A NEW APPROACH FOR MINORITY BUSINESS

THEME: "LOOK TO US"

A Pilot Seminar Sponsored Jointly by:

National Aeronautics and Space Administration
Office of Minority Business Enterprise, Department of Commerce

Dates: Tuesday and Wednesday
June 4 and 5, 1974

Location: Quality Inn
7200 Baltimore Avenue
College Park, Maryland
(3 miles south of Beltway on Highway 1)

Invited Participants:

Minority Businesses
Related Service Companies
National Minority Associations
and Organizations
Minority Consulting Firms
Minority Colleges and Universities

Seminar Chairman: Harrison Allen
Lewis Space Center
Cleveland, Ohio

Staff and Resource People:

Jeffery Hamilton, NASA
Dick W. Orrick, NASA
Peter J. Chenery, NASA
Gayle Parker, NASA
Robert Zimmerman, NASA
Eugene Rosen, NASA
William Mathis, NASA
Robert DellaValla, NASA
Arthur Wolter, NASA
Charlotte Spann, NASA
Bob Sewall, OMBE Regional Office
Joe Dixon, OMBE Regional Office
Hyman Silver, Rockwell International
Don Sword, Rockwell International
Julius Goldstone, Rockwell International
Meyer Marks, Sears Roebuck
Elmer Koltae, Sears Roebuck

The seminar will provide

- L. An Information Center
Manned by NASA and OMBE staff
Relevant publications from both agencies will be available.
2. A Demonstration Recon Center

General sessions and workshops meet as designated on program schedule in the following locations:

- | | |
|-----------------------|-------------------------|
| 1. Prince George Room | Lower Level, Rooms Wing |
| 2. Terrapin Room | Lower Level, Rooms Wing |
| 3. Room A | Lower Level, Lobby |
| 4. Room B | Lower Level, Lobby |

(Management of this conference is provided by Evaluation Technologies, Inc. of Arlington, Virginia, a minority business, under contract with NASA.)

GOALS
FOR SEMINAR PARTICIPANTS

1. To discover how your company/organization can benefit from available NASA technology.
2. To learn how to meet NASA requirements for receiving contracts and grants.
3. To find out how to use the business assistance offered by OMBE-funded organizations.
4. To gain information on subcontracting opportunities with NASA prime contractors and other majority firms.

PROGRAM SCHEDULE

Tuesday, June 4, 1974

8:30-9:00 Registration Lower Level, Rooms Wing

9:00-9:30 Introductory Session Prince George Room

Presiding: Harrison Allen, NASA

Speakers: Dr. Dudley McConnell, NASA

Mr. Alex Armendaris, OMBE

Congressman Parren Mitchell

9:30-12:00 Workshops 1 and 2 Workshop 1: Terrapin Room
The NASA TU Program - Workshop 2: Room A
An Overview

(Participants will be divided into two groups for these workshops. Presentation and content will be the same in both workshops.)

Participant Objectives:

- (1) What the TU Program can mean to your business
- (2) Solving technological/production problems through the RDC
- (3) Gaining access to available patents through licensing

10:30-10:45 (Break)

Staff:

Mr. Jeffrey Hamilton, NASA - TU Program

Mr. Dick W. Orrick, NASA - Seminar Information Center

Mr. Peter J. Chenery, NASA - RDC

Mr. Gayle Parker, NASA - Patent Licensing

Mr. Robert Zimmerman, NASA - Demonstration
of manufactured product developed from
NASA technology

12:00-1:30

Lunch

Prince George Room

Speaker: Mr. Barry L. Johnson, Past Chairman, Board of Directors
National Association of
Black Manufacturers

1:30-4:00

Workshop 3

Terrapin Room

Government Marketing
and Procurement

Participant Objectives:

- (1) How you can sell to NASA/Federal Government
- (2) How NASA develops sources and evaluates proposals
- (3) How to be responsive to NASA needs/RFP's, including pricing
- (4) What you need to know about NASA contracts and grants, including R and D opportunities

2:45-3:00 (Break)

Staff:

Mr. Eugene Rosen, NASA - Procurement/Small Business Office

Mr. William Mathis, NASA - Current Contract Activities

Mr. Robert DellaValla, NASA - Needs/RFP's

Mr. Arthur Wolter, NASA - Source Selection, Proposal Evaluation

Ms. Charlotte Spann - Contracts and Grants

3:00-4:30

Workshop 4

Room A

OMBE Marketing and
Technical Assistance

Participant Objectives:

- (1) How you can utilize the marketing expertise and technical assistance provided by OMBE-Funded organizations in your area
- (2) Answering your questions on getting help from OMBE-funded organizations

Staff:

Mr. Bob Sewall, OMBE Regional Office

Mr. Joe Dixon, OMBE Regional Office

4:30-6:30

Social Hour

Location to be announced

Sponsored by
Evaluation Technologies, Inc.

PROGRAM SCHEDULE

Wednesday, June 5, 1974

9:00-9:30 Discussion Group Room B
(Participants will be notified.)

9:30-10:00 General Session Prince George Room
Presiding: Harrison Allen, NASA
Speaker: Dr. George M. Low, NASA

10:00-12:00 Workshop 5 Terrapin Room
Private Sector Marketing
and Procurement

Participant Objectives:

- (1) How majority corporations utilize NASA's
TU System
- (2) Subcontracting opportunities for you with
majority firms
- (3) How to develop subcontracts with NASA prime
contractors

10:45-11:00 (Break)

Resource people from

McDonnell-Douglas
Martin-Marietta
Rockwell International
Don Sword
Julius Goldstone
Sears Roebuck
Meyer Marks
Elmer Koltae

12:00-1:30 Lunch Prince George Room

Speaker: Mr. Richard Bela, General Counsel
Latin American Manufacturers
Association

1:30-3:00

General Session

Prince George Room

Presiding: Harrison Allen, NASA

Presentation: NASA TU in Action - The Kuku Fastner
....Mr. Charles Kubokawa

Information Announcement: Commercial Opportunities
Fluidic Respiratory Flow Meter
Lead Paint Detector

(Phase I marketing studies will be available.)

Special Announcement of NASA RFP

APPENDIX B: CORRECTED PROGRAM AGENDA

TECHNOLOGY AND OPPORTUNITY
A NEW APPROACH FOR MINORITY BUSINESS

THEME: "LOOK TO US"

A Pilot Seminar Sponsored Jointly by:

National Aeronautics and Space Administration
Office of Minority Business Enterprise, Department of Commerce

Dates: Tuesday and Wednesday
June 4 and 5, 1974

Location: Quality Inn
7200 Baltimore Avenue
College Park, Maryland
(3 miles south of Beltway on Highway 1)

Invited Participants:

Minority Manufacturers
Minority Service Companies
National Minority Associations and Organizations
Minority Consulting Firms
Minority Colleges and Universities

Seminar Chairman: Harrison Allen
Lewis Research Center
Cleveland, Ohio

Staff and Resource People:

Jeffery Hamilton, NASA
Dick W. Orrick, NASA
Peter J. Chenery, NASA
Gayle Parker, NASA
Eugene Rosen, NASA
William Mathis, NASA
Robert DellaValle, NASA
Arthur Wolter, NASA
Charlotte Spann, NASA
Roscoe Monroe, NASA
Ted Lettes, OMBE

Staff and Resource People (cont'd)

Bob Sewall, OMBE Regional Office
Joe Dixon, OMBE Regional Office
Joseph Jackson, Wash. Council for Equal Business Opportunity
Richard Hykes, Wash. Business Resource Center
Sy Gottlieb, Rockwell International
Dan Sword, Rockwell International
Bud Goldstone, Rockwell International
Meyer Marks, Sears Roebuck
Elmer Koltai, Sears Roebuck
Vern Brett, Martin-Marietta

The seminar will provide

1. An information Center

Manned by NASA staff; supervised by Dick Orrick, NASA
Relevant TU and other NASA publications will be available.

2. Demonstration Recon Centers

General sessions and workshops meet as designated on program schedule in the following locations:

- | | |
|-----------------------|-------------------------|
| 1. Prince George Room | Lower Level, Rooms Wing |
| 2. Terrapin Room | Lower Level, Rooms Wing |
| 3. Room A | Lower Level, Lobby |
| 4. Room B | Lower Level, Lobby |

(Management of this conference is provided by Evaluation Technologies, Inc. of Arlington, Virginia, a minority business, under contract with NASA.)

GOALS
FOR SEMINAR PARTICIPANTS

1. To discover how your company/organization can benefit from available NASA technology.
2. To learn how to meet NASA requirements for receiving contracts and grants.
3. To find out how to use the business assistance offered by OMBE-funded organizations.
4. To gain information on subcontracting opportunities with NASA prime contractors and other majority firms.

PROGRAM SCHEDULE

Tuesday, June 4, 1974

8:30 - 9:00

Registration

Lower Level, Rooms Wing

9:00 - 9:30

Introductory Session

Prince George Room

Presiding: Harrison Allen

Speakers: Dr. Dudley McConnell, NASA
Mr. Alex Armendaris, OMBE
Congressman Parren Mitchell

Introduction
to Workshops
1 and 2: Jeff Hamilton, NASA

9:30 - 12:00

Workshops 1 and 2
The NASA TU Program-
An Overview

Workshop 1 - Terrapin Room
Workshop 2 - Room A

(Participants will be divided into two groups for these workshops. Presentation and content will be the same in both workshops.)

Participant Objectives:

- (1) What the TU Program can mean to your business
- (2) Solving technological/production problems through the RDC
- (3) Gaining access to available patents through licensing

10:30 - 10:45

(Break)

Staff:

Peter J. Chenery, NASA - RDC Activities
Gayle Parker, NASA - Patent Licensing

12:00 - 1:30

Lunch

Prince George Room

Presiding:

Harrison Allen, NASA

Speaker:

Mr. Barry L. Johnson, Past Chairman,
Board of Directors National Association
of Black Manufacturers

1:30 - 3:15

Workshop 3

Terrapin Room

NASA Marketing
and Procurement

Participant Objectives:

- (1) How you can sell to NASA
- (2) How NASA develops sources and evaluates proposals
- (3) How to be responsive to NASA needs/RFP's, including pricing
- (4) What you need to know about NASA contracts and grants, including R and D opportunities.

3:15 - 3:30

(Break)

Staff:

Eugene Rosen, NASA - Workshop Coordinator
William Mathis, NASA - Current Contract Activities
Robert DellaValle, NASA - Proposal Evaluation and Awards
Arthur Wolter, NASA - Requirements and Capabilities
Charlotte Spann - Unsolicited Research Proposals

3:30 -4:30

Workshop 4

Room A

OMBE Marketing and
Technical Assistance

Participant Objectives:

- (1) How you can utilize the marketing expertise and technical assistance provided by OMBE-funded organizations in your area
- (2) Answering your questions on getting help from OMBE-funded organizations

Staff:

Bob Sewall, OMBE Regional Office - Federal Contracting
Joe Dixon, OMBE Regional Office - OMBE-funded Organizations
Joseph Jackson, Washington CEBO - Financing Minority
Businesses
Richard Hykes, Washington BRC - Functions of BRC

4:30 - 6:30

Social Hour

Location to be announced

Sponsored by
Evaluation Technologies, Inc.

Wednesday, June 5, 1974

9:00 - 9:30

Discussion Group

Room B
(Participants will be notified.)

9:30 - 10:00

General Session

Prince George Room

Presiding: Harrison Allen, NASA
Presentation: Mr. Walter Sanderson, Sanderson
Industries
Speaker: Mr. George Vecchietti, NASA

10:00 - 12:00

Workshop 5

Terrapin Room

Private Sector Marketing
and Procurement

Participant Objectives:

- (1) How majority corporations utilize NASA's
TU System
- (2) Subcontracting opportunities for you with
majority firms
- (3) How to develop subcontracts with NASA prime
contractors

10:45 - 11:00 (Break)

Resource People from

Rockwell International

Bud Goldstone
Sy Gottlieb

Sears Roebuck

Meyer Marks
Elmer Koltai

Martin - Marietta

Vern Brett

12:00 - 1:30

Lunch

Prince George Room

Presiding:

Harrison Allen, NASA

Speaker:

Mr. Rick Bella, General Counsel
Latin American
Manufacturers
Association

1:30 - 3:00

General Session

Prince George Room

Presiding:

Harrison Allen, NASA

Presentation:

The KUKU Fastener
Charles Kubokawa, NASA

Commercial Opportunities... Jeff Hamilton, NASA
Fluidic Respiratory Flow Meter
Lead Paint Detector

(Phase I marketing studies will be available.)

Announcement of NASA RFP: Jeff Hamilton, NASA

APPENDIX C:

EDITED TRANSCRIPT OF SPEECHES AT GENERAL SESSIONS

(Note: The materials in this appendix were transcribed from tape recordings. Except for a very few sections where a literal version would have been confusing to the reader, editorial changes were minor. The final general session at 1:30 p.m. on Wednesday, June 5, 1974 was not recorded.)

CHAIRMAN: HARRISON ALLEN

Ladies and gentlemen, may I have your attention please? Thank you. Good morning, my name is Harrison Allen. I'm a Technology Utilization Engineer from NASA's Lewis Research Center, Cleveland, Ohio. And I'm your Chairman for this two-day seminar on Technology and Opportunity. Now on behalf of NASA, National Aeronautics and Space Administration, and OMBE Office of Minority Business Enterprise, the two Government agencies that are co-sponsoring this seminar, I would like to extend our appreciation for your taking the time from your busy work schedule to attend this seminar. I'm sure that before it is over you will feel that it is time well spent.

Now the objectives of the meeting are for you to discover how your company or organization can benefit from or commercially exploit available NASA technology. Second, to find out how to use the business assistance offered by the OMBE funded organizations to exploit the NASA technology. Thirdly, to learn how to meet NASA's requirements for receiving contracts and grants. And finally, to gain information on subcontracting opportunities with NASA prime contractors and other majority firms.

Now, in addition to providing the information that I just cited and the objectives, more specifically after your two days here with us, you will leave with specific information about nineteen (19) NASA patent license opportunities and twenty-seven (27) NASA innovations, already published in the NASA Tech Briefs. We also have thirteen (13) unpublished innovations which you'll have the first opportunity to hear about, and then numerous opportunities for contracts and grants with NASA as well as prime contractors and other majority firms.

Now to get the meeting underway, we will first have some introductory remarks from your co-hosts, NASA and OMBE.

First, I would like to introduce Dr. Dudley G. McConnell, NASA
Assistant Administrator for Equal Opportunity Programs. Dr. McConnell

SPEAKER: DUDLEY McCONNELL

Thank you very much. Harrison and I are old lab mates from Cleveland and it's a pleasure to be working with you again, Harrison.

My real task this morning is to introduce Congressman Parren Mitchell. However, it is very hard to be in front of an audience at a microphone without making just a few remarks. This is really a fine moment for me. I really enjoy this because this is the chance for me to see an idea come to fruition. We thought for a long time how we could bring to the community more of the resources of NASA and more of the resources of the Federal Government. We are just very happy that the Office of Minority Business Enterprise, Alex Armendaris and his staff, were willing to join with us to put this program on. We in Government must work for the people. I think it was Lincoln that said, or maybe it was the Constitution that says, that "We govern only to the extent that the people allow us to govern." And the motto of the space program is that the space program is run for the benefit of all mankind. This program is another effort on NASA's part, in conjunction with the Department of Commerce, to assure that the results of the program benefit all people, not just mankind because there are lots of womenkind in the audience too, but to make sure that the program is a benefit to all people. It's a two-part responsibility. We as minorities must assure that the Government is working for us, and we in Government must assure that we fulfill our obligations to all people. Now there are many resources that the Government has to offer. EEO's job is to assure that minority and female communities have access to jobs and all the benefits that go with that Government payroll. The Minority Business Enterprise program assures access to Government as a market and it assures assistance of Government in developing entrepreneurial skills. However, if we minorities are to be fully competitive and to gain a permanent place in the mainstream of American economic life, we must utilize all of the resources of Government, including the technical and problem-solving resources. We must use the

Agriculture Extension Service. There is a huge great agriculture library, research library, right up the road on Route 1. We must use the Commerce Business Information Services, and we must use the high technology and technical information services. Just as Greek society was noted for its architecture and Roman society was noted for its law and militarist accomplishments, our modern society is noted for technology. And to be a part of our society, we have to become technically competent. The purpose of this seminar is to form a relationship which will help us in NASA, help us in Government, serve your needs. And we will feel the seminar was a success if we gain that information.

Technology transfer, which is what we are about here, is simply a means of getting ideas, processes, or devices which were developed in NASA's Space Mission Program - to get these concepts into use in our commercial economy.

Today we focus on the minority business sector. We've had a technology transfer program in NASA for a long time. It is our feeling that that program was not properly focused, not given the proper emphasis on the minority business sector. Finally, we hope to assist in bringing the minority business sector and university communities together in this transfer process. University communities can contribute greatly to the development and advancement of minority businesses by aiding in the application of modern concepts in minority businesses. The business sector can aid, of course, in providing financial support to universities and as a source of employment for university graduates. So I see that there are many synergistic things which would come out of this seminar. I really look forward to it succeeding. This is an experiment. We want to see how this works and learn from this experiment about technology transfer to the minority business program elsewhere around the country, elsewhere around the country, elsewhere in Government. But now the main task, the main pleasure that I have, is to introduce Congressman Parren Mitchell, our keynote speaker this morning.

Congressman Mitchell is a member of that very distinguished family of Maryland which has played many key roles in the life of the state and the life of the Baltimore community, and in fact in the life of our country, through the halls of Congress. Clarence Mitchell, with the NAACP, had long served to assist the development of minority communities in Congress. Congressman Parren Mitchell is adding so much more to that effort. Congressman Mitchell served with honor during the Second World War; served as a commissioned officer and I guess as a company commander. After service, he received his bachelor's degree from Morgan State in Baltimore and a master's degree from the University of Maryland. He then joined the faculty at Morgan State and was Assistant Director of the Urban Studies Institute at Morgan. Perhaps through his involvement with many community programs, Congressman Mitchell entered the field of politics. He was elected to the 92nd Congress in 1970 and has since been reelected. Congressman Mitchell has been active in making the resources of Government work for the people of his district. Thus, it is particularly fitting that he should keynote our program this morning. The goal of this program is to aid minority communities in the full utilization of NASA and of the Government's resources. We would like very much to hear from you now, Congressman Mitchell.

SPEAKER: CONGRESSMAN PARREN MITCHELL

Thank you. You really should have gotten my brother Clarence. He's a much nicer man than I am. He is very gentle and pleasant and he should be the guy to be here.

Each time I come to a seminar I leave with the impression that I'm increasing in the amount of ignorance. I never get the opportunity to participate in the real gut workshop where things are discussed and people learn. I don't get the chance. The best I can do is to get a write-up. We will have a write-up of this? I get home late at night and I get a chance to read the write-up and I learn some things. Once again I will miss most of the workshops, the real gut part of the seminar today. I'm on the Banking and currency committee and we are marking up a housing and community development bill, which is an absolutely horrendous bill in my opinion. And I think it is anti-poor, anti-black, anti-rural, and somehow or other the mantle of the loyal opposition has fallen upon me. I'm doing my best to try to make it a decent bill. I alone have 32 amendments, and therefore I have to be there for the markup. I think the opposition on the banking and currency committee would just love it if I were not there this morning and missed my turn to introduce six more amendments, all of which are designed to make the bill more palatable.

This seminar could not come at a more propitious time in my opinion. I'm absolutely convinced, from where you are in your respective communities, that we are witnessing the emasculation really of a number of programs that were designed to help minorities and the poor. OEO is one illustration, the Model Cities program is another; and I could just run down the list picking off either the emasculation or the demise of programs that we have great hope for and great belief in, and we see them withering on the vine or being nailed to the cross. We have always maintained, or at least I have over the past 4 or 5 years, that there was a real commitment to minority enterprise on the part of the Federal Government. And that almost represented our last

hope. That really represented our last hope. I don't think we can turn the tide that is moving against anti-poverty programs or model cities programs. I don't think we can.

I think there is something loose in the country, a kind of mystique, that says that we have done enough for those people. But we were hoping that the minority enterprise effort would remain a real solid commitment, and hoping that we could achieve another few forward steps as black people and other minorities under the minority enterprise program. Quite frankly, I have been very, very disturbed recently at what appears to be a loss of interest or a loss of the drive associated with the minority enterprise program at the Federal level. There are all kinds of complications, and certainly I know Alex Armendaris is always spurring this movement trying to bring it to the forefront, saying that we can't lose interest in there. I know that others are, but we reached a point nationally in the black community where we felt that the interest had flagged so badly that it was necessary to have a conversation with the Vice President of the United States, Mr. Gerald Ford.

That conversation took place just about two weeks ago at a meeting with the National Association of Black Manufacturers. I have the write-up of the meeting and it was a tough session, because the guys were saying, "Mr. Vice President, is there a real commitment? Do you really intend to move things to help us climb another step in the economic ladder?" And I must admit that the Vice President was not ducking the issue. He came through very clean and strong and solid, saying, "There is a commitment, we are going to honor it. If things are going wrong, we want to get them straightened out." But the fact that we got to that point, that we had to raise questions about the commitment was very, very disturbing to me. Most of you are educators, technologists, scientists, or businessmen. I want you to carry two sets of messages to people. The first is: Forget all about the technical ability of black firms, forget that for the moment

and carry also a message, a really psychological message, to minority firms. I think minority firms have made a tragic mistake of underselling themselves. They come in saying, "Oh, this project is open? Oh, my gosh, that's too big for me. I don't think I had better tackle that." They make the tragic mistake of underestimating their capabilities. And the sad thing is that the various members of the National Association of Black Contractors, the various businesses associated therewith, are only operating at about 20 or 30% of their capacity. Which means that if they get psychologically together, they can get a whole lot done and become far more entrenched in the business of Government and minority enterprise.

The second message that I would like to have you carry to the various minority businessmen is to tell them not to fear any kind of consortia arrangements. I'm amazed when I hear the number of businessmen - minority, black, or Spanish-surnamed-say, "I don't want to enter into a consortium." Well, that is almost the entire way that the whole structure in this country has been built in terms of contracts. Very few firms are so big that they can do the whole job. Is Rockwell here? One of the biggest, but I assume that from time to time you enter into a kind of arrangement with another company in order to get the job done and you do that without any fear or trepidation. But I have found that too many minority enterprises have such an unreasonable, almost paranoid fear about a consortium type arrangement, and we have got to sell that message. We have to get that across that that is a way of doing business. It is a traditional way of doing business. It is a way of strengthening minority enterprise. It is a way of getting the job done.

The third message that I would like you to take to the contractors, the businessmen themselves, is not to be afraid to be an aggressive advocate and in an aggressive pursuit of a contract. There is a phrase - I think it comes from the Basque language - "fils du bast." Originally it meant "son of a pack-saddle," and then as we moved down through the years it came to

next page missing

organization. It has got to be that way. Unless the very top priority of Rockwell, General Motors, or whatever is to make that absolute binding commitment to NASA, you are not going to give a real assist to minority enterprise. This is not to denigrate middle management, it is not to denigrate procurement officers, and it is not insult anyone. But the name of the game at middle management level, the name of the game at procurement level, is to make things go as fast as they can on time. And obviously that will often mean that a procurement officer has to take time out to talk with some guy who is the minority contractor, who is not really in the mix of things to be done. Whereas if you have a commitment from top management level that that's an edict, I assume that it would be carried out. That's what I think NASA has got to insist on: that before any arrangements are worked out at middle level, procurement officer level, or any other level, get the commitment from the very top.

2. The second caveat for the Government agencies and the private sector has to do with the 8(a) set aside program. All of you are familiar with the 8(a) set aside program, I hope. I have heard far too many people in the private sector saying, "Well, indeed, there will be no preferential treatment, no extra consideration given to minorities, save within the 8(a) contract program." And I think that is a nonsensical approach to take. The 8(a) contract represents such a miniscule part of the overall Government contracting relationship that if we confine our efforts just to 8(a), just to the set aside for minorities, what we are doing is effectively blocking in minority enterprise to a very, very limited sector where there can be no real significant growth over a period of years. I was amazed that one of the Government agencies said in a meeting, "Well, we don't intend to give any consideration to minorities save for the 8(a)." That is totally wrong. A whole host of factors were operative in this country to exclude us from the economic process -- when I say that, I'm talking about black folks -- to exclude us from the economic process for almost a century, and it is unfair. It is unfair to say, "Now the flood gates are open and you

can come in, but you have to come in on a competitive basis with every company that has been in operation for the last 25, 50, or 60 years. It defies logic to set that kind of ground rule. Now the 8(a) is fine, but I'm saying to NASA, and Rockwell, Minneapolis-Honeywell, and all the rest of them that might be represented here, "Don't confine your efforts just to 8(a), because if you do, you're stifling the growth of minority enterprise."

3. The third caveat for the government and the private sector. When NASA or any other Governmental agency is negotiating with the private sector, and you get a commitment from the top, and you get an agreement not to be restricted to or constrained by the boundaries of 8(a), the third thing is that NASA has got to insist that the private corporation set up a reward incentive for minority enterprise. Despite the fact that we make millions of dollars in business, we are still human beings and human beings act in terms of incentive. It is one thing to come out and say that we are committed to being an equal opportunity employer, it's another thing to say that promotions, salary increases, and all other kinds of benefits will accrue to those persons or groups that work in a real incentive program and follow through on that program. It is totally different from what we have been doing in many other areas. So you have any questions on that?

4. The last caveat that I hope will be taken to the government, private sector, and to the minority contractors themselves. When the Government agency attempts to formulate a viable effective minority enterprise involvement program with the private sector, the fourth thing that that agency or the Government must insist upon is clear cut goals and objectives for minority enterprise. Clear cut. May I digress for just a moment? In the heat of the debate on the housing bill, I had an amendment which would put in or add on to the community development portion, economic development. They had social development, a whole lot of things. I said, "I want to add on economic development," and there was a big wrangle about that, you know. And one of the Republican Congressmen said, "Now you are arguing about economic

development and you can't even define it." And I said, "Of course I can. Economic development is a system or process by means of which inputs are made into the business growth of a community and that money accruing from that business growth is spread through the community." The Congressman said, "Fine, thank you for the definition."

I don't know if that was the definition or not. I really don't. In the heat of the debate, I gave him an answer. Now I'm citing that to point out that that is the kind of vague generality or vague statement that we often get in terms of an equal opportunity commitment. We are committed to pursuing; we are committed to expanding; we are committed to revitalizing; we are committed to strengthening communications between us and the minorities. But that's all very, very vague and general. That does not stack up in my mind alongside of a program that says: this is 1974; by 1984 we are going to increase the number of minority contractors by 20%. It does not stack up along a program that says: this is 1974, and by 1984 we are going to move minorities into four more areas of contracts that they have been excluded from in the past. We have got to insist on those things, otherwise the whole program becomes a shell game. The whole thing, well, the shell game, that's a pretty harsh word to use, but it becomes a method, an illusion, an illusory kind of thing, saying you know, you are really making progress but you really are not. Those are the caveats to the government and the private sector; those are the caveats to the minority businessmen.

In conclusion: 50 years old, kinda tired, kinda worn out, kinda frustrated. I think this is great. I think this is great. I think this seminar will go. And I hope it will go so well that it can be duplicated all over the country. Apart from the organizations co-sponsoring this conference, I'm awfully pessimistic. I'm awfully pessimistic about the real gut-involvement of blacks and Chicanos and others in minority enterprise in this country. I'm pessimistic because I indicated earlier the kind of climate which is maybe not anti, but certainly not pro; and I don't see

the leadership coming from either Government or the private sector to try to turn that climate around. And I would hope that as a result of this seminar and others that will come, there will be a sort of revitalization of a commitment made to those that happen to be different in skin color, happen to be different in racial origin, and happen to be different by virtue of differences in economic circumstances and social background. I commend you for putting on this conference. Please make it a good one so I can learn some more, and I promise you that I will read all the voluminous notes that you send to me.

Thank you very much.

SPEAKER: ALEX ARMENDARIS

I don't often like to follow Parren Mitchell when he gets up here. The Congressman is always very eloquent and always has some very interesting thoughts to convey about minority enterprise. As you know, that is his specialty. He has taken an interest in this program and the general area of minority enterprise for a number of years. I'm not so pessimistic as the Congressman is about the prospects of minority enterprise because it has a distinct beginning. As far as the Office of Minority Business Enterprise is concerned, it goes back to 1969. We are dealing with some very broad-based statistics provided by the Census Bureau that indicated that minorities own 4% of the business and less than 1% of the business assets in the country, they represent 17% of the population. A gloomy situation but something that was tell-taling that something had to be done. And in August or September of this year we should have some new statistics provided about the progress that minority businessmen have made in the country over the past five (5) years. I think it is going to show a substantial amount of progress, because as you move across the country, that's what people are talking about today. They are talking about business, about profit, about starting new businesses, about getting involved with expanding businesses or larger businesses. It's an exciting prospect to look forward to the efforts of what is being started today.

I was involved in business for some twenty (20) years before I came to the Office of Minority Business Enterprise, working primarily with majority firms, in the area of marketing. And my business was to identify new products and they would select the very top and the very best. And they would only select the product after they were sure it was going to make a successful product in the market place. They were sure it was going to provide a profit to the company. We had to be competitive in order to survive, with the companies that I worked with. And that's why it is exciting about this particular program because we are talking about identifying new products and new markets. And that's the only way that we are going to succeed in business in the future. That's the only way I think that we are going to make a real penetration into the market place and become competitive; to become aggressive competitors in the market

place, independent competitors in the market place - not byproducts of the Federal Government, but competitors in the private sector.

It's very important for us to find some close avenues and communication with corporations around the country, the private sector, where the opportunities are. The Federal Government is limited not only by its very nature as a federal government, filled with bureaucracy and procurement regulations and so forth, but it's limited in scope of market. It has no markets that are going to generate the graduation for minority businessmen to become competitors. But the private sector is not that way. The private sector is all of the opportunities that we have. This agreement between NASA and OMBE is going to offer us some avenues of taking technology and transferring it into the private market place to become competitive, to be able to deal with companies on a profit competitive basis.

I think competition is the answer. I don't think that we can expect minority enterprise to survive in the long run with 8(a) programs or any other kind of Federal program or set-asides. I agree with what the Congressman was saying. I think we have to move out into the markets. And that means becoming competitive, that means identifying new markets, new products and products that are going to provide profit. And this is critical, and this is essential.

We are getting a look at what is happening in minority enterprise. We don't sit still at OMBE. We are very excited about what is going to happen in the future. We are not discouraged because prime rates are up, although they went down about a fraction of a percent in Chicago yesterday. That was some interest. We have a responsibility - a responsibility to the many minority businessmen out there in the market place who need assistance to expand, a responsibility to provide or develop better techniques to these businessmen so that they can survive in that market place.

Moving around the country looking at the profit margins, I see that today's situation isn't a very happy one, not only with minority business but with any kind of business. So we at OMBE have sort of changed directions. One of the directions is to provide more management and technical assistance. Not to just

continue to start more minority businesses in the market place, but provide more management and technical assistance to those that are out there already. That does not mean that we are going to stop assisting businesses to start, but we are going to be more careful. We are going to use the most forceful marketing discipline that we can imagine in order to make sure that the businessman is going to survive. And not only survive, but make money so he becomes competitive. We are not satisfied with the situation. And we are looking at it very carefully. But by the same token we are not foolishly going to go out there and promise people a lot of things that can't really happen unless they go through the difficult time of developing. And that's what we are doing at OMBE today. We are concerned about what is happening but we are still very optimistic about what is going to happen in the future.

Industry more and more every year is joining with the Federal Government to make this happen. Industry more and more is adopting its own initiatives so that it can independently develop a minority enterprise program. We don't think they're doing enough, we don't think enough of them are participating. And we are attempting to go out and sell the members of industry so that more of them will become involved in the minority enterprise program. We have absolute commitment from the Secretary of Commerce, from the President of the United States, and the minority enterprise overall. It was in 1969 that the Office of Minority Business Enterprise started, and since that time it has developed and mushroomed. And I have every thought and belief that, with the support of the administration and Congress, we are going to continue to grow. And we are going to continue to do the most important work that this administration can take pride in. And that is the development and process of entering minority individuals into the market place so that they can benefit from the free enterprise system. It is going to be a difficult task. But I and the OMBE staff are going to do everything we can to work with NASA in this particular agreement and make it a successful program.

THANK YOU VERY MUCH

CHAIRMAN: HARRISON ALLEN

Thank you, Mr. Armendaris. Well, we have heard from Dr. McConnell and Mr. Armendaris, who represent the chiefs of NASA and OMBE. I would like to take a few moments to recognize a few of the Indians, by that I mean some of the people from NASA and OMBE that really did the leg work to make this seminar a success. So when I call your name will you quickly stand up so everyone can take a look at you? First, I would like to introduce Mr. Roscoe Monroe, NASA's program director for the seminar. Mr. Monroe. There he is. Second, Mr. Arthur Williams, OMBE's program director for the seminar. And last but by no means least, Mr. Leon Johnson, the seminar manager from the staff of Evaluation Technologies, Inc. /

Now to get on with our seminar. I would like to take a few moments before we have our first work session to show you a few examples of aerospace technology that have already been transferred to industry and our commercial products that are on the market today. For example, this is part of the Echo Communications that was put in orbit some years back. Basically, it consists of a plastic material that was manufactured by one of our plastic companies. The aerospace company developed the process for applying this tenacious coating of aluminum which made the Echo work very well while it was in orbit. Since that time this aerospace firm has put on the market what they call the space rescue blanket, which takes advantage of some of the insulation properties of this deflective aluminum product. Also, the same company has put on the market a sturdier version of the blanket called the "stadium blanket." Some of the football and sporting companies have gotten involved in the act. But these are just examples of products that are being sold today.

Another one that is just coming on the market is a device to allow blind people to identify paper money of various denominations. By photo sensitivity of the paper, reflection from a light, they can determine

whether it is a five, one, or twenty dollar bill. Likewise, another marketable item is the audio light meter which will allow a blind person to determine whether the light is on in a room. These are being merged into one device which will hit the market very shortly.

Here is a jacket that is going on the market by McGregor, utilizing this aluminum plastic material that I indicated in my earlier examples. Another such item is the surface switch which incorporates a very low voltage, cheap means of installing switches in homes. It consists of three items: a switch which you put on the wall, a flat tape-type wire to run the switch to a light fixture, and a transformer to step the voltage down.

Last, we have something for the ladies. This is a thermo magic cooking pan. Basically it is a heat pipe device that allows one to cook the roast in half the time. All these products resulted from aerospace technology that has already been transferred to industry.

Now let's turn our attention to technology which NASA can transfer to you. Our first workshop concerns itself with the NASA Technology Utilization in overview. Our speakers this morning will be Jeffery Hamilton, Director of the Technology Utilization Office at NASA headquarters; Gayle Parker, who is the Assistant General Counsel for patent matters at NASA headquarters; and Peter Chenery, who is the Director of the North Carolina Science and Technical Research Center, which is one of NASA's RDC's, which we call Regional Dissemination Centers.

First, we will have some opening remarks from Mr. Hamilton, and then we are going to break into two groups to function during the second part of our seminar. One group is going to go to the main facilities of the Quality Inn in the basement to room A, the second group is going to go in the room adjacent to us right here in this building.

I would like to make one other comment to announce that the workshop sessions are going to be recorded. The reason for the recording is so that we will have the opportunity to better evaluate the results of the seminar.

So now at this time I would like to present to you Mr. Jeffery Hamilton, Director of NASA's Technology Utilization Office.

Mr. Hamilton.

SPEAKER: JEFF HAMILTON

Thank you, Harrison. I wanted to give you just a brief overview of what we are going to try to accomplish this morning. We have had a program for ten years in Technology Transfer at NASA and it is really not anything unusual. I don't know if most of you understand what we mean by technology transfer. It is something that goes on all the time and has been going on in the history of economic development in the world, but what is new and what NASA has been learning to do a little more successfully every year is how to move a relatively high technology generated from mission requirements in aeronautics and space into other elements of the economy. This kind of thing is by no means easy. In fact, it is probably one of the most difficult things you could ever imagine to try to push a high technology research-and-development-results capability into other parts of the economy where it is not necessarily perceived to be useful. But there are real benefits to doing it.

We think that using high technology can increase the productivity of services and reliability in the performance of products. These things have demonstrable economic benefit for the economy. But the real problem is getting the high technology understood by the entrepreneur, so that an innovation emanating from high technology research and development can be picked up, modified, adapted, marketed, and generally brought into the market place on a successful basis.

To do this, in the past ten years, we have had a series of programs that have become more and more detailed and specific as we have gotten into them. The first is one that you are going to hear a lot of. It is our publications program, where we take innovations that we require all our technical people and contractors to report under a provision of the contracts we have. Actually it is a provision of the Space Act enabling legislation that set up NASA in 1958. It requires all innovations to be reported to the Government. We evaluate them to determine their potential usefulness, and then publish them and try to get them out into people's hands so they can be incorporated in commercial products and processes.

This has been going on for some time, with a great deal of success. It is very difficult to trace how a particular NASA innovation has been used, because in many cases a commercial firm will take an idea from some place, maybe from his own product line, and some other things, and a perception of what the market place is willing to do. He'll modify all these things in his own facilities and a product will come out, and it's difficult to trace the genealogy of the technology. Nevertheless, we have enough evidence to prove that it works.

What we are going to offer you today are some of these innovations that we have selected because we thought they would be appropriate to firms in this community. There are many more. We have published 5,000 of them in the last 10 years. If nothing else, I would be willing to offer everyone of the firms that you represent a membership in the Tech Brief mailing list so that you can get these innovations. I'm not saying that you will have an instant commercial success out of them, but if you're willing to invest a lot of work and effort you probably will get something useful out of this.

Walt has some unpublished innovations, as Harrison indicated, and these I think are kind of interesting in the sense that this is the first time they've ever been announced to the public. If there is something in these that strikes your fancy you do have a certain lead time on the competition, because they will not be published for some months.

Lastly, we have two very specific areas that I think you will find very interesting. One is the patents that NASA has taken title to. They are available for licensing, some 2,000 of them.

Our Assistant General Counsel for patent matters, Mr. Gayle Parker, is going to give you a very enlightening indication on how you can find out about the patents and what their limitations and values are, and how you go about applying for licenses both non-exclusive and exclusive. We have the authority to grant exclusive licenses at NASA.

You are also going to hear from Mr. Chenery, Director of the North Carolina Science and Technology Center, which is a Regional Dissemination Center of NASA.

test of the market place in the face of competition are another.

Nevertheless, we have entered into a few of these things and we have had a reasonable amount of success. You'll see some of them demonstrated here and there will be a talk later on on one of them.

We are going to try another interesting experiment and I'm not going to give you much detail on it right now, but it will come out later on. We are going to take one of these kinds of applications projects, and we are going to make it available to the minority community on 8(a) Set-Aside, on a competitive basis. We don't have any company in mind. We hope that one of the companies here, or one of the companies that you know about some place, will be the right kind of company that will want to participate in this. I mean the right kind. We are looking for somebody who really wants to make something happen, not someone that wants a Government contract, because the contract is trivial compared with the thing that we are talking about. What we want to do is to take a technology and bring it successfully to the market place. To do this, we will offer technical advice and consultation on an intensive basis with the firm that is selected. And we will pick up some of the front-side risks involved in modifying the technology. We hope to work out an arrangement with a market place if we can find the right match with the technology so that there will be some incentive later on, if things work out successfully, and through the demonstration phase that there will be an opportunity to sell it in significant quantities.

We are going to do one of these, mainly because we want to do it well. If we try to do a whole lot of them we won't succeed at all; we'll be doomed to failure. But if we try one and we expend enough of our energy and we get the right participation of the firms in the minority sector, I think we shall be able to say the seminar was a success. We should at least have demonstrated that a minority firm can pick up a relatively high technology item and make a commercial success out of it. We would hope that the mechanism would be established, that avenues would be open, that minority firms would see the value of high technology products - realizing full well the risks in moving them into the market place, yet seeing that by bringing them into the market place there

is a great deal that can be accomplished for the economy as a whole, for the minority firm, and perhaps for some kind of a public need also.

I'm not going to mention any more about this now. We'll discuss it in more depth later on. One advantage that you have being at the seminar is that you'll have a great deal more knowledge than the other people who will see it in the Commerce Business Daily announcement later on.

I want to thank you all for coming and I hope this seminar will be successful in the sense that you will learn something and that we will learn something; and I think that if it is successful, we can really assume that we have accomplished something. And by this I mean a better perception from our standpoint of the real difficulties you have to face in acquiring technology. We understand the difficulties generally, because even large corporations have a difficult time taking a high technology product and delivering it successfully to the market place.

We don't claim to offer panaceas to all your kinds of problems in the sense that this technology will make you instant millionaires. We think it can help. We want to find the correct mechanism and avenue to make it help, to make it effective; and to do that we are just going to have to roll up our sleeves and work out details.

THANK YOU VERY MUCH.

CHAIRMAN: HARRISON ALLEN

Thank you, Jeff. Now ladies and gentlemen, we would like to continue with our first workshop on NASA's Technology Utilization program. We are going to break up in two groups. Jim Dixon will you take everyone from this part of the room forward over to the first workshop, Room A, with Mr. Gayle Parker?

Ladies and gentlemen, before we continue with our seminar I would like to call your attention to the exhibit located in the back of the room and also the information center that we have positioned in the back of the room. As I mentioned earlier, we are going to give you information about 19 patent license opportunities and we have packets of these back there. Also we have an abstract of patents that aren't included in our special package there. We are going to talk about 27 Tech Briefs which we feel will be of interest to you. And we also have an index of all of the NASA Tech Briefs that have been published throughout the year. And in addition to that, of course, I mentioned that we have about 13 Tech Briefs that haven't been published. You have the opportunity to get the first crack at them. These are also located back in the information center. We have a few people back there to answer any questions and give you any assistance you might need.

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CHAIRMAN: HARRISON ALLEN

Well, thus far in our seminar, we have heard from NASA types, OMBE types, and for our luncheon speaker we have an excellent gentleman that I would like to present to you. He'll give you the point of view of the minority businessman. Our luncheon speaker is Mr. Barry Johnson, who is the President of the National Association of Black Manufacturers. A few introductory remarks about Mr. Johnson.

He is a graduate of Indiana University and the Oklahoma City University, where he was in the top 10% of his class. Mr. Johnson's interests have centered in urban affairs. He has been an attorney with the Oklahoma City Urban Renewal Authority for five years. Presently, he is President and Chairman of the Board of Directors of the Northeast Oklahoma City Manufacturing Company. Now, in addition to his continuing work with the Oklahoma City Renewal Authority and his executive position with the NEOC Manufacturing Company, Mr. Johnson for the last three years has been Chairman of the Board of Directors and is currently the President of the National Association of Black Manufacturers. I give you Mr. Barry Johnson.

SPEAKER: BARRY JOHNSON

Let me take just a second to make a few corrections in that introduction. I served as Chairman of the Board of the National Association of Black Manufacturers for the past three years. This year I am taking a rest. We have a new chairman and some new leadership which I think is good in any organization. So I'm not the President.

I was very pleased to be invited as a speaker at this seminar. I have had a few things on my chest I've just been dying to get off, and now I've got the opportunity. Some four years ago in Dallas, Texas, approximately 35 black manufacturers gathered together for the purpose of forming an association to build and enhance their companies' economic development. As chairman of that association for the past three years, there are certain observations that I have been able to make which I think are pertinent here.

These observations may be characterized as illustrating what I choose to call and what may very well become the Achilles' heel of America. We noticed in those early years the lack of awareness by white corporate America of the minority businessman or, in our particular instance, the manufacturer. Now like it or not, a careful study of this country will permit you to draw one conclusion, and that is that for the most part in terms of running the country, it is done by major white corporations. Now for whatever reason, whether it's buyer prejudice, lack of corporate commitment, or whatever, white corporate America has yet to stand up and declare that it will do its part in making the American dream a reality for all Americans. And this they can accomplish very quickly and with minimum effort on their part.

About three weeks ago we had our national convention in Chicago. One of our speakers there was a fellow named Benjamin Duster, who is the President of one of Chicago's largest MESBICs. In his paper he illustrated the point that I just made, and I brought it with me because I think it makes it very

clear and I would like to read a part of it. It's called "The Phenomenon of the Disappearing Market." He states that

this thesis was promulgated after numerous observations of the phenomenon of the disappearing market for minority suppliers to the corporate community. There has been extensive rhetoric about affirmative action programs, set aside programs, and minority vendor programs. In most urban centers, this has created the assumption that once a minority entrepreneur has demonstrated motivation and perseverance, produced a quality product or service, and received MESBIC financial and managerial and technical assistance, his company can expect to overcome the profitable sales barrier by selling his product or service to a ready corporate market. We suggest that the foregoing assumption of a corporate market for minority suppliers is a myth. And that the pursuit of that mythical market has been a major factor in the poor performance of many MESBIC portfolio companies. Stating this another way, too many individuals were overly hopeful that the corporate community really meant to help minority businesses overcome the debilitating weaknesses brought on by prior economic and financial discriminatory practices. The word "hopeful" is used to emphasize that all understand that basic premise of a capitalistic free enterprise system that competition eliminates the weak and least efficient while the strong and efficient survive.

We offer the following as indications that the profitable corporate market for minority suppliers is a myth. Commitments to buy from qualified minority suppliers have resulted in orders for a dozen pencils instead of a dozen desks, a shipment of 50 lbs of freight instead of 500 lbs., an order

for 5,000 stampings instead of 50,000 stampings, an order for 50 electronic switches instead of 5,000 electronic switches.

What do we perceive is the reason for this? Well, Mr. Duster's reason is as follows:

Most purchasing executives are among the tens of thousands of white commuters who daily flee the metropolitan areas and the growing "minority menace." It is the height of naivete to believe that they will ever willingly award a meaningful, profitable contract to a minority businessman, because the businessman's gross profit might equal the purchasing agent's salary. The sociological perspective at that level of the corporate structure isn't about to let that happen.

The vast majority of minority businesses which have not exploited the black market and have attempted to generate profitable corporate sales have found themselves futilely running from one corporation door to the next, receiving a token order here and there, and getting deeper and deeper in debt despite studies ad nauseam and prolific management and technical assistance. In short, most minority businessmen trying to operate non-traditional minority businesses and sell to the white corporate community have been reduced to space age sharecroppers - never profitable and always looking to a better crop of sales next year. There have been numerous allusions to that piece of pie which is going to be shared with black suppliers .

He then suggests that instead of getting that piece of pie, black suppliers have been getting excess trimmings from the top crust of the pie.

Now another observation that we learned in the past three years is the actual way the American economic system works, and that is simply this: The dollar is the basis, the real basis, for everything that occurs in our lives; and it is the exclusion from participation in the system or participation in the cash flow, the opportunity to capture or control our share of these dollars, that frustrates millions of minority Americans and prevents any real success in solving our problems. As manufacturers, we recognize and we accept our responsibilities to do everything we possibly can to insure sound economic development in our own communities. We also recognize that sound economic development dictates participation in the system and that we must fight to get it, and I mean that literally.

Historically, America has reached a point that it must either deal with its domestic problems or face the consequence of continuing crime and dissatisfaction with the system. And perhaps even eventual overthrow. As a black manufacturer and an American, I am dedicated to forcing, and yes, I mean forcing, the economic system that we all love so dearly to let us in. Now what is NASA's role in this struggle? NASA, as one of our Government agencies, has immense talent; they control large numbers of dollars. In my opinion they can do perhaps as much or more than any other Government agency in assisting black businessmen, minority businessmen, in forcing, and again I repeat, forcing the change.

I view NASA as the future building block of this country, because I believe that it is in space exploration and the development of new technology that our future lies.

NASA as well as other Government agencies can assist us if they wish to; and we are committed, and I mean totally committed, to forcing them to help us. Now let me give you an example of what they can do. I overheard in some of the conversations that the black manufacturers are struggling now with Rockwell International, so apparently this is no longer a secret, not that it was to begin with. But Rockwell International has one of the

major Government contracts for the space shuttle. NASA controls that contract. By using their influence and power, that's what we are talking about, and your talent, you can insure that the minority business community gets a fair share of that billion-dollar-plus contract. And by fair share I'm talking about a significant portion, profitable portion, of the contract.

There are many other ways in which NASA can help us in our struggle. We go back to my basic premise which is the dollar. There are about 36 minority banks in this country. The stronger and more financially capable and able that these banks grow, the better it is going to be for the minority community in which that bank is, because the manufacturers and other businessmen will have money available to be loaned to them to expand and let their businesses grow. So I would ask NASA a question. How much of your dollars are deposited in these banks? How much of the dollars of your contractors and subcontractors are deposited in these banks? How much of the dollars of your contractors and subcontractors are actually placed with minority business? This is the kind of thing that can make us well overnight, so to speak. It is this kind of thinking that we must all become aware of if we are ever going to do anything about our problems.

Now it is my understanding that OMBE is participating in this program. OMBE has another role that they can play. They have been charged by the Government to assist minority business. My friend Parren Mitchell has taken them to task many times and we think justifiable so because they have not been performing. We took them to task in Chicago for the same reason. This is not to say that as manufacturers we are against OMBE, but it is to say that we intend to see that we become successful businessmen and in turn make our communities successful.

In conclusion, I would like to challenge NASA to join with us in really building a strong, an economically strong minority population in this country. We need your assistance and genius. I look forward to the day

when we won't need our association any longer. And that will be the day
when we are in the mainstream of America. And that mainstream is economic.

CHAIRMAN: HARRISON ALLEN

Thank you, Mr. Johnson. I can only say that you gave us food for thought after a big meal.

Well, according to our program we're on schedule. We should convene our next workshop at 1:30. That will give us a chance to take a stretch before we do. We are not going to break up into two groups this afternoon. Our next workshop is scheduled for the Terrapin Room, that is right directly behind the wall. And the subject of that workshop will be Government Marketing and Procurement. The participants that you will hear from - let me quickly run down that listing so you'll be prepared - will be Mr. Eugene Rosen of NASA's Procurement and Small Business Office; Mr. William Mathias of NASA's Needs and Requests for Proposals; and Mr. Arthur Wolter of NASA's Source Selection and Proposal Evaluation. And since we must have a woman in this group it seems, we have Ms. Charlotte Spann for Contracts and Grants. Let's adjourn for now and we will convene at 1:30 in the Terrapin Room.

Thank you.

CHAIRMAN: HARRISON ALLEN

.....We also have our information center back here again this morning, so feel free to take as much as you like. And of course view our exhibit. Yesterday, I showed you some examples of NASA technology that hit the market place, and it was called to my attention that we have one gentleman with us this morning who has an item which he has developed from NASA technology. If you want to take about a minute or two he'll show it to you. He is Mr. Saunders from Saunders Industries; he wants to show you his heavy duty stapler. Mr. Saunders. I'm sorry it's Sanderson. I can't read.

PRESENTATION: WALTER SANDERSON

Thank you, Mr. Allen. I would like just a minute to show you this staple remover developed by one of the centers of NASA. This is for industry rather than the office. It works on the same principle as the little staple remover with which you take your staples out in the office. However, this is for cardboard boxes and it pulls the staple right out of the carton, rather than using a screw driver which ruins the carton. Why would you want to save the carton? Well, many of you know that many large cartons have to be salvaged. I was just telling my friends over here at Zenith, for whom we do quite a bit of work in Chicago. They get their cabinets in cartons, and then of course they assemble the component parts into the cabinets. Then they put the cabinets back into the cartons. Consequently they would like to save these cartons. Sears and many others use the same carton they get their parts in.

This is primarily what this is for. It will work easily. We have started on some component parts. We do not have a distributor as yet. We hope that, of course, someone will move in and help us do some marketing on it. But it is a very good item. If there are any questions, I might be able to answer some for you in regards to this.

QUESTION: How did you come about getting the technology from NASA?

ANSWER: Well, Junius, I'll tell you. In addition to my small company, I'm somewhat directly involved with the Government. I happen to be a reservist with the U.S. Department of Commerce. I get more publicity in Chicago than I should get, you see. And it seems that everyone knows me and thinks that I am a millionaire. And I'm struggling to pay my payroll every week. But I might say that they contacted me and sent it down without me even asking. So out of everything that I have been doing, I say that this maybe the beginning of a payoff, you know, from a trade mission to Africa and all of

that which I paid my way through the government. Well, maybe I can get paid back. Okay. But that is how I came about it.

Anything else?

Thank you very much.

CHAIRMAN: HARRISON ALLEN

Thank you, Mr. Sanderson. And now to get on with the formal activities this morning. You will notice on your program that Dr. Low, our Deputy Administrator, was scheduled to talk with us but unfortunately something came up and he sent a very able substitute. So this morning we are going to have an overview of NASA's minority business activities by Mr. George Vecchietti.

Some background about Mr. Vecchietti - Mr. Vecchietti is presently the Assistant Administrator for Procurement at NASA's Headquarters, Washington, D.C. Mr. Vecchietti has been associated with NASA's procurement since the early days of the agency. He came with the agency in 1960, as Assistant Director of Procurement and Supply, and in 1964 became a Director of Procurement. Mr. Vecchietti is an attorney and at one time practiced law in Washington. He is a life member of the Board of Advisors and presently President of the National Contract Management Association.

I give you Mr. Vecchietti.

SPEAKER: GEORGE VECCHIETTI

All that says is that I am a retired reformed lawyer. Thanks a lot. I'm at a double handicap and I guess you people know handicaps. I won't brag too much. But I am filling in for Dr. Low and I do have to get back at his orders at 10:30. My driving time is 35 minutes flying low, so I really would like to stay and take my lumps. I hear you gave the procurement people from Goddard a pretty good working over yesterday and that's healthy. But I'm going to have to give my talk and run, and I apologize and I'm very sorry for that. He not only sent me in as a stand-in; he ordered me to be back at 10:30. I'll see how I do through the traveling.

I'm not going to begin to try to talk about technology utilization and spin-offs. I think you got the right people; you've been hitting at them. I'm just going to tell you what the cost of our total program has been, and then you can fit the TU aspects in perspective.

The emphasis on this Minority Business Enterprise program really and truly starts at the top. There are no two people in Washington that believe in it more than Dr. Fletcher and Dr. Low. I have been personally exposed to them, I have seen them put the heat on, and I see that they mean what they say. Now I'm sure that you feel that if this is true, and it is, you would like to see more results. And I really think that we're just getting to the phase now where the payoff is starting, and I'm even going to bore you with a few statistics. I really expect to see dramatic increases in contracting, either through 8(a) or through the subcontracts which I want to talk about for my major premise, or through your actually winning some competitive procurements in the open market place - not the commercial but the government ones, which in turn, of course, foster your ability in the open world.

We think the program is pretty good and the results are starting to show. But we know damned well that it can be better. You've heard of goals?

We have goals, we have dollar goals in the 8A program and I'm against them as such for one reason. I have a different kind of goal. I've testified on the Hill in the small business program, not minority, and each year they set me numerical goals. And I really thin that lends itself to gaming whether you agree with me or not. It's like the budget; we put in a number that we think we can beat and they'll ask for a number that's impossible, and somewhere in there there's a negotiation and a number comes out. But I think you ought to have goals.

My own personal goal is to work with small business to beat last year's record. And I don't qualify that. Beat it as much as we can. And how do you make that happen? You make it happen by daily contacts with people at all levels, people like Dudley McConnell and his total shop, our own people, our compliance people who are interested in the business aspect of this thing - getting the contract, which is my business, and seeing that you get contracts or at least an opportunity to get one. It takes daily continuous pressure. It takes head knocking.

You know, I haven't found so much that it's prejudice. It's the fear of the unknown; the fear of the unproven. Our technical people are looking for technical excellence, and they say, "I know this big outfit can do it." I face it everyday when they want to go sole source. I want to go to the X company because I know he can do it. We say: "B___ S___ . Get competition, and prove that he can do it and better and cheaper, if possible." So the resistance that I have seen in the technical people and the program people has been this concern that they are not going to get the product. And I'm sure you face it - the people in business. And we have to overcome it. And how in the hell do you overcome it? It's chicken and egg! You've got to be given the opportunity to get the contract and deliver the goods.

There are people who are not minority firms who have an awful time doing business with Uncle Sam. That's a complicated mess. I know the clauses we put in the contracts. You know, you can say, "Here's the scope of work,"

and you have about 20 beautiful pages and you say, "What's that?" And I've heard one guy say, "Look, don't worry about it, it's not recommended reading. Just get on with the job." Then you get the job and pretty soon the friendly contracting officer says, "But you didn't do this or you didn't do that." You need someone - I use the word spoon-feed - and the 8(a) you know, sole source, is what does this.

Now that takes extra work. You've got to have a little empathy for us. The guy wants the job done and he says, "I don't want to have to help him do it; I'll do it with him." But that's what it amounts to at the beginning. Then hopefully you just disengage. The guy's on his own. I don't have the facts here, but I've seen many cases where the firm that got an 8A - non competitive contract - went out and beat some of the big boys and about three years later did a hell of a good job.

Now enough of the primes. I'm looking at my good friend Sy Gottlieb, and I'm looking you right in the eye, Mr. Rockwell, our biggest contractor. We have all the clauses that talk about subcontracting opportunities, and that we want our prime contractors to give the minority community subcontracts. They do it well. We had a case to penetrate Rockwell recently because one or two of your organizations came to us and said, "We don't think we're getting our fair share." May I talk about you a little bit, Sy? They are better than some of their competitors in the aerospace industry. If you look at statistics, they are on the whole above the average. But that's not good enough, because above the average isn't that damned great. The average is pretty poor. We're not going to get a big bat out, but we can sure pressurize them, consistent with good technical program performance in the shuttle.

NASA is, you know, predominantly concerned with technical excellence, and it's that technical excellence, hopefully, that has yielded the results like this staple remover we just saw, for example. There are many things that go into making one of these spacecraft fly that we don't hear about in the

paper. We hear about all the exotic things. But there are also the little nuts and bolts, if I may call them that - the small stuff that, if it strikes something in your imagination, maybe the one you can make some money on. And that's what you are here for, to make money and get it spread around. We're here to see that the benefits of space get out into the industrial community and find their way into the mainstream of our life. There are a lot of good things coming out of this program. We've done a lousy job at selling them.

I was at a dinner last night where Vice President Ford was the main speaker, and he spoke about the future of the space program. He said that we haven't convinced the public that there is this benefit, this spin-off. I think what we are doing now is one way to make it pay off. I know you'll want to know, "Where do I hear of it and how do I get the opportunity?" I think that is what you all are covering in this program. We let you get at it and then you'll take it from there.

We're going to put more emphasis now on the subcontracting in our major source evaluations. We have a category that we call "other factors." They're not scored, but in there goes minority subcontracting. And it gets weighed. We had a very famous case a few years ago down in Huntsville, Alabama. It was a support service contract with many opportunities for subcontracting. It had been done that way. It was a consolidation of what used to be a lot of little contracts. We put some real tough language in the RFP that said, "We want minority subcontracting. We want you to tell us who you've gone after in what areas. And if you didn't get any, why you didn't get them." And, you know, we meant business.

We picked Hayes International, and they had this one firm as a subcontractor that got a subcontract for about \$7 million. I can't name the firm, but it's Gaston - Mr. Gaston. He came in with Senator Sparkman, which was an interesting thing in itself. Hayes was not scored as high technically. Their costs were just about equal to RCA, who had been the incumbent, but

we picked them and we stated that our choice was based on their minority subcontracting program.

We got a big fat protest which went to the Controller General. We nearly lost, but we won. He said it was within the agency's discretion to do this. And that was the swinger. Now RCA had had a little old tokenism, and I'm sure you're familiar with that. They had a couple of small contracts. This guy Gaston was not a disadvantaged guy. He is a millionaire. He's a bigger one now as a result of this. But I've talked to him and he's pushing young people. This was custodial work. You ought to hear that man talk about that as a profession. He is interesting a lot of people, the young people down there in Alabama area, to get out and earn this money and then go out and strike out for themselves; and he's giving them a chance. Hayes worked with him, Mr. prime contractor. They had a program and they helped him submit his proposal to them. In other words, they worked it out.

Most people don't have the time to get on with the main job because they are so busy taking care of what Uncle Sam has put in the contract. We owe you more simplified contracts, not just you, everybody. Particularly minority firms. There must be some way we can cut the red tape. We need certain clauses that are required by law, and you would do it in good business. But a lot of them are pretty horrendous.

I'm rambling, and I'm running out of time. But I really feel that you want to get that spin-off opportunity. There is nothing like getting the contract or the subcontract and getting your hands in it right up to your elbows and getting involved, taking a lump and keep coming back. And we are there to try to help you keep coming back. At each center we have a minority business enterprise counseling section. And it's going to cover all disciplines like training, procurement management, and technical assistance to contractors or would-be contractors, and then the minority business community relationship. That's an important thing, that they know that we want to be involved and care and have a voice in the local area - that's

Cleveland, or Los Angeles, or Huntsville. To get in it and have a place to talk. These people, all our minority business officers, are going to be on it, and the small business guys, and the procurement man, will be there. You've got to get the man at the top, you know. I can get up and spread the gospel all I want, but I can get Low to say something and things start to happen. And you get the Center Director to tell him something and he'll do it. He doesn't need to be told. I'm talking about his counterpart, the pale face sitting over there writing the contract. He needs something.

And you know, the people do believe, once they get over that first hurdle they find out that it is no big mystery. What in the hell was I worried about? But we've got to get there. Now I'm playing my broken record again. And it's that first step. Anyway we can come up with a better first step, we're going to get this program rolling.

I think our numbers look pretty good. They're not that great, but you know in 1970 we had three contracts worth 77 thousand bucks. Through last year, we had 105 of them worth eight and one-half million. And so far this year we've already got 7.8 million and our goal is 11 million. I'm told we are going to try and beat that by 10% and it looks good. That's at least up. I hope to see that doubled. Some of the breakthroughs will do. I think these things snowball. You get the contracts, you all deliver the goods and do a decent job and people are going to say this is just another great asset in the industrial world and we're going to use them because I think they want to.

Again, I apologize. I can't stay here. I'd love to stay here and answer questions and take some lumps. The agency is for the program. We're dedicated to it. Low goes to the Counsel that is headed by the Secretary, Under Secretary Tabor. I go with him or for him sometimes. And they mean business. I'm impressed with OMBE's decentralization as they get out among the people, out in the field. They busted up their big headquarters staff and

they moved them out into the field. Give them a chance. I've done that decentralization and the lines of communication get screwed up. Give them a chance and work with them. And you know, keep after them too. But I think it's going to work. It's got to happen out in the market place.

I thank you very much for the chance of being here. I'm sorry I can't stay, I really would like to.

Thanks again.

CHAIRMAN: HARRISON ALLEN

Thank you Mr. Vecchietti. I think you did an excellent job pinch hitting for Dr. Low.

QUESTION: Even though Mr. Vecchietti can't stay, I would like to come up and make a comment if I may.

ANSWER: We'll give you two minutes here.

QUESTION: JUNIUS HAYES

I'm Junius Hayes. I'm going to put my other hat on now. I'm the Executive Director of the National Association of Black Manufacturers. There were some very admirable comments that Mr. Vecchietti made and I wanted him to know that I appreciated the comments. But I've got some real problems with what he said. I really do. The President and his Administration have taken it upon themselves to make minority business a national priority. And from what I can see, it is very obvious that the message hasn't gotten down to Mr. Vecchietti. He talks about goals, which I love. I operate on management by objectives. He talks about the goals - 8-1/2 million last year, and he has a goal of 11 million this year. We've said nothing about the percentages - okay? Now as far as I can see, that represents about three tenths of one percent. Now when we talk about equal employment, which is another national priority, they have a goal of 18 to 23 percent that they are going to hire minorities. Now, I'm saying that I don't particularly want to be on that slow boat to China. As far as I'm concerned, that's a very slow boat to China. And he made some comments about Rockwell which I want to deal with. Everybody knows how we deal with Rockwell, and I'm glad to know that Sy got a promotion.

Mr. Vecchietti also said that he doesn't like goals. He likes to do the best that he can or do as much as he can. And I'm saying, is that a recent gesture? Is it that you just started to do the best that you can? I was told a long time ago that you were doing the best that you can and all you did was come from 8.5 to 11. You talk about competition. Barry Johnson said yesterday that competition really means to eliminate the weak, and it is very obvious that we are the weak. We are just getting started and we haven't penetrated the mainstream, so it is obvious that we are weak. But this competition is a way of getting rid of it.

VECCHIETTI: Can I interrupt you for a moment?

HAYES: I've got one more problem.

VECCHIETTI: How long is this damned thing going to go on?

HAYES: It's going to be all day long.

VECCHIETTI: If I can get back here, I'd like to get back here and talk to you.

HAYES: I sure would appreciate it.

VECCHIETTI: Let me say one thing. When I said do the best I can, I meant the numbers aren't big enough. I don't think 11 million is that great. That's the game. I tell you it's the game. It's the one that we say that we can try to beat. I was leveling with you. It ought to be 20 million or 30 million. And I agree with you. You are the one that motivated me to start talking about this prime contractor.

HAYES: We would appreciate it if you would come back, if you would make your run and come back.

VECCHIETTI: Okay. I'd like to sit down here and we'll have a nice time of it.

APPLAUSE

CHAIRMAN: HARRISON ALLEN

You took my notes, Junius. (HAYES: It's a wonder I didn't take the podium.)

Well, I see we're off to a good start. Well, it looks like everyone is going to have their day.

Our next workshop session, which is going to be held in the Terrapin Room, next door behind the wall there, is going to be on the subject of the Private Sector Marketing and Procurement. And our resource people are going to be some of our prime contractors and I imagine they might take the occasion to respond to some of the comments that we've heard this morning. Particularly the Rockwell group that has been named rather prominently. And speaking for Rockwell International will be Mr. Sy Gottlieb - my pronunciation isn't what it should be this morning - and Mr. Bud Goldstone. For Martin-Marietta it will be Mr. Vern Brett and for Sears Roebuck it will be Mr. Meyer Marks and Elmer Koltai.

On each table there are evaluation forms which will take about 15 minutes to complete. Leave it on the table and it will be picked up and then we will adjourn to the Terrapin Room.

(VOICE: Do you want us to do it now?)

Okay, take the forms with you. You can fill them out after the first workshop session and then they'll be collected. Okay? So we will adjourn to the Terrapin Room.

CHAIRMAN: HARRISON ALLEN

Ladies and gentlemen, may I have your attention? Well, after our excellent luncheon speaker we had yesterday, we decided we'd give you a repeat performance by having another manufacturing association representative address us. Today as that speaker, we have Mr. Richard Bela, General Counsel of the Latin American Manufacturers Association called LAMA. He is the President of Techni Data Laboratories in California and a partner in the law firm of Curley and Bela in Washington, D.C.

Mr. Bela's background was that he was with the government for three years in the Office of Economic Opportunity. He is also the founder of the Interstate Research Association, a non-profit research development foundation specializing in programs for Spanish-speaking Americans. And he is also a partner in the Inter-American Research Association, a private management consulting firm.

His educational background is that he has a BA in Inter-American Studies from the University of Texas, in El Paso, and his law degree from the University of Texas Law School. With that I present Mr. Bela.

SPEAKER: RICK BELA

I want to thank everyone here for inviting me over to speak on behalf of the Latin American Manufacturers Association, which is a partner and counterpart to the Black Manufacturers Association. And let me just say that the assistance that we have received from the black manufacturers has been tremendous. When I first got to Washington about eight years ago, we were involved in the civil rights movement and the equal opportunity movement. We came up to the leadership in the civil rights movement and requested assistance and support. In a very businesslike manner the black leadership said, "We would like to. Our resources are few, but we will just have to wait until you guys are at a level where we can operate as partners." We weren't then. The mood has changed in this regard, particularly in the business area, though we are not yet at the level - LAMA is not at the level - that the black manufacturers are. The Black Manufacturers Association has a tremendous amount of sophistication. The success with which they have been running their organization is phenomenal. And our history is only one year old. So the assistance that they have given us has cost them money, has cost them resources. And we are very thankful for that, and we think that as a result of it they have certainly taught us a great deal of success through unity, which at this point I recognize has been largely at their expense; but we hope to make that up. And I'm sure that we will.

The reason why I hold so many titles - first of all, let me explain that I am a businessman, talking to you as a businessman. I'm President of Techni Data Laboratories, a small electronics firm in California. I am also a partner in a law firm here in Washington, and through that I serve as Corporate Counsel for LAMA, which is an organization that I took part in helping to organize. And all I can say about all of that is perhaps as a minority businessman you have to moonlight a lot to really make it. So that's my excuse for my many titles.

In my comments today I would like to point out to you or explain to you what our LAMA strategy is, particularly as regards the aerospace industry and NASA in particular, and with it give you a little bit of a brief history of my experience in this whole area of equal opportunity for minorities. I'm glad to be here today in what is the first pilot technology transfer seminar for minority businesses. And I have also been in the initiation of the Equal Employment Commission, the U.S. Commission on Civil Rights, the Office of Economic Opportunity, the Office of Minority Business Enterprise, the SBA Set-Aside Program; and now here I am today at the Technology Transfer Seminar. I think what that indicates, to me at least, is that there have been a great deal of programs and yet very few solutions. Because probably we wouldn't be here today if anyone of those five or six that I mentioned had really done their job. But here we are again. But I'm not discouraged, I'm really not. I think perhaps that this is going to be different. And over the past eight years I haven't lost faith.

Let's assume that perhaps because we are all here we really think that this time it is going to work. The bit of history that I have witnessed here in Washington began with the Johnson Administration (which incidentally gave an awful lot of jobs to Chicanos coming out of Texas). The emphasis of that administration was, as I view it, to upgrade the general welfare of the minority population. And that was interpreted to mean to increase services in terms of health, employment opportunity, housing, education and the like. We had the overall experience and all of the other things that you have seen, much of which unfortunately failed really in terms of how minorities view it. And then, finally, the Nixon Administration and a new emphasis, the emphasis really being on the economy, as I understand it, the idea being that what we have to do for minorities is increase their income potential, and if we do that then they will buy better health, and they will buy better education, and they will buy better housing, and this will be the route to go.

Well, having worked first in one administration and seen that a great deal was lacking in our goals, I said fine, this really sounds good, and maybe this is a way to go. As you probably noticed with the last presidential election, a great many of the Spanish-speaking believed that also. For the first time in history we had tremendous increases in the Spanish-speaking vote going for the administration. Let me point out some factors about the Spanish-speaking. They are concentrated basically in a few key states: in the Southwest, New York, Chicago, Texas, and California. Okay, so there are ten million or twelve million, whatever your figures may be, concentrated as highly potential source of votes for any kind of presidential or national campaign, because there just cannot be a president elected unless he's won in either New York, California, or Texas - in some combination.

So in these states, as a result of this administration's political rhetoric, there was a great deal of increase in the Spanish-speaking vote. In Texas alone there was something like a 30% increase. I think California had about 20% increase. And you're talking about a people that by and large idealized the Kennedys and what they stood for. So a tremendous job was done in telling our people "We are going to take a new approach. We are going to give you equal opportunities in income and economics." It's something that you must imagine, and the results were overwhelming in terms of getting out the vote and voting for this administration.

Now unfortunately, the assumptions that were made as a result of those promises, as to what the realization of those commitments were by this administration, are questionable. In terms of significant appointments, we have lost since the election. I could list them, but the fact is that our community feels to a large extent betrayed by this administration. Now I'm not saying that that is a fact, because we still have a few years to go at least under this administration for at least a second term of Mr. Nixon. And so there is still time to make good those promises.

Frankly, I think no minority community should be the exclusive property of any one party, and so I look for a two-party system. But a two-party system with which we can truly bargain, and not simply be bought off at the cheapest price.

Well, moving then to what we understood the Minority Enterprise Program was to be, we concentrate basically in possibly three areas: The Office of Minority Business Enterprise, the SBA, the 8(a) Set-Aside Program which is applicable to government, and the Minority Business Enterprise Program which is applicable to private industry.

In the area of OMBE, let me say that considering what they have to work with, they've done a tremendous job. We have to agree there. We have seen in our community sixteen - as I recall the latest figure, maybe more - 16 Spanish-speaking banks where before we had only one or two. We have about 21 Savings and Loan Associations where before we only had one or two. So we have had both kinds of increases.

Where I am disappointed with OMBE is in one particular area, where we must look to OMBE as the advocate for minority business enterprises, and this is the intent of the legislation, the administration. At least that has been what we have been led to believe. And when I see that OMBE is not officially advocating more money out of this administration for an expansion of this program that it just barely launched, then I think that OMBE is not living up to its commitment and to everything that it has set out to do. And until such time that this agency becomes truly an advocate within the administration for us the minority businessman, then everything else that it is doing has to be judged with that in the balance.

The 8(a) Set-Aside Program, as you probably know, works basically through SBA, the theory being that Government agencies have a commitment to contract with minority firms. The way it works is that you set these contracts aside, SBA contracts, for them; the SBA subcontracts to a

minority firm. There was a great deal of activity in this area, particularly in the area of what we call the self services or the social services, and it opened up a great deal of opportunity for minority firms in management consulting and in Government consulting contracts.

Now this last bit, some say it lasted only up until the election. It lasted a little bit longer than that. And then there was a great deal of cutback in that. This was a particularly good area because what that allowed us to do was to be able to get into business with very little capital outlay - by very little I mean sixty thousand to a hundred and fifty thousand to set up a consulting firm. Essentially what you do is you get some good management guys that have to work on it full time, set up an office, telephone, etc., and do a brochure. Then you go out and find ten or twenty of your best friends that have good experience and good qualifications, and you market them. In other words what you're selling is brains. As a result of that you have low overhead. And by low overhead we're talking about from sixty to a hundred thousand a year. So it allowed us to get into that kind of an area and that kind of a business experience. And it was good while it lasted.

But then over the last two years there have probably been more failures of minority consulting firms than in any other areas, simply because, as the market for these services contracts, it is the big firms that survive and the minority firms, in spite of the 8(a) program, that go out of business. I know, because I'm a partner in one of them.

About a year and a half ago we were doing some studies, through a management consulting firm that I had organized, in the whole area of minority business and on the whole concept that what we needed was emphasis on increasing the economic opportunities for the minorities. As a result of those studies I became convinced that this was the route to go and that this Government had a real commitment to minority business enterprise programs. Well, I became convinced to the extent that I took out my savings

and I talked six of my friends into doing the same thing. I talked them into borrowing what they could. We had set up a certain amount of money that we had to have, and we went out looking for a company. We wanted to get into an area where we felt the minority business enterprise program was going to be a force. We felt that that area was going to be the aerospace industry because of the commitment that NASA had, or should have had, to that program.

We did find a firm. We found some Anglo engineers who had been in the aerospace industry that came out of Hughes and Rockwell. (Actually I think everybody comes out of Hughes if you're an electrical engineer.) These guys liked the idea, and I said look what we will do is form a kind of a partnership. And I said look, our studies have shown and the industry tells us that minority firms have not succeeded because they lack two kinds of necessary ingredients. One is a high degree of technology and the other is a capability record.

So we said okay we are going to solve that. The way we are going to solve that is we are going to find a firm that has a capability record and we found one that had an eleven year history, that had done business with Rockwell, Libby, Samsel, Department of Defense, all of the biggies. We talked these Anglo engineers that came out of the aerospace industry into taking a minority position in the stock of this old company and we took the majority. We bought the controlling interest in the firm, made it an MBE and said we've got a real gold mine here.

We walk into Rockwell, we walk into Libby, we walk into Douglas and we say that we have a minority firm, we've got a proven capability record, we have partners in here that come from the very industry, and here we are ready for contracts. That was a year ago this June. To this date, with all of that going for us, I have received one \$50,000 contract which I received finally in late February, incidentally from Rockwell,

space people. And I'm thankful for that. But out of the business that we had in the firm for this past year, which amounted to about \$200,000, \$150,000 came from the non-MBE sector. By that I mean that the majority of our business, three-fourths of our business, is coming from that area where we wouldn't dare to say that we are a minority firm, because our experience was telling us that that was working against us, that as soon as we came in and said that we were an MBE they would put us into a different kind of a funneling system. They would send us to some guy way down the line who was about to retire, who was called the MBE guy, and the first thing he says is, "Have you filled out a form 173?" So we say, oh alright, no we haven't. Well, here it is, 50 pages. We went back, filled that out. Came back and he said, It will take two months to get you in our catalogue, our directory of MBEs. So we waited around and got on that directory and we waited and waited for bids. We have yet to receive a single bid from about twenty of these applications, and I guess we are in every directory that you can imagine that OMBE has funded incidentally. We have yet to receive a single request for a bid from those directories.

So what I found was that I was wasting valuable time and resources talking to these guys out here in MBE, when the guy that we had that had been with the firm continued their contacts with the engineers, the program people, the people that made the decisions in contracting. Had that not happened we would have been broke by now, because the MBE program is in no condition even today to function.

Now let me give you some experience that happened to me day before yesterday. And this is really up to date. In fact, I did it with this speech in mind. Through LAMA we have been working with NASA extensively. We have had several meetings, cordial meetings. We met with Dr. Fletcher. He has indicated a great deal of support for our organization and for our objectives. It has not yet gotten down to where the contracts are located. The day before yesterday I visited the Jet Propulsion Laboratory (which is a rare type, non-profit type arm of NASA, funded heavily and essentially

by NASA) with the idea that if perhaps in private industry I was having trouble penetrating that market, then perhaps I ought to go to a NASA subsidiary because probably there the word has already gotten down to them. And I went in and I told them about my firm. I took two of my best Anglo engineers with me, right? People that had very high qualifications, and I said, "I'm interested in possibly bidding on some of your end-of-fiscal-year funds, and I'd like to know about your MBE program."

Let me tell you exactly what they said. They said, "We have an MBE program; it is part of our contract requirement. It's a contract clause based on a procurement reg, which is in turn based on an Executive Order, which is in turn based on the administrative commitment, and a congressional commitment for an MBE program." And the wording that I was shown in that clause was that the contractor, in this case the Jet Propulsion Laboratory, had to provide maximum effort in providing maximum opportunities for minority business enterprises. So I said, "Well, how do you interpret that, what do you do with the result of that?" And he said, "We pay this man, Mr. Anderson, very nice man, to go out and find minority enterprises and develop a directory, and we have identified a great many." And he showed me a book this thick. And I said, "That's fantastic, that does a great thing for Mr. Anderson, but what does that do for minority business enterprises?" He said, "We give them an opportunity to bid."

Well, gentlemen, I don't have to be a Chicano to get an opportunity to bid. I don't have to talk to you about a minority business enterprise program, and we don't have to bull shit each other about a minority business enterprise program for you to give me an opportunity to bid. I can walk into any company and have that opportunity, and they won't even ask me if my name is Italian or Chicano or whatever. But if this is all it means, then what I'm saying to you is that an opportunity to bid for a minority business enterprise is essentially an opportunity to go broke.

Now let me explain that. Minority business enterprise, by and large - and I'm familiar at least with the Chicano community, the Spanish-speaking community, which also includes the Puerto Rican firms - are small businesses that have established marketing capability and that are doing business at about \$100,000, maybe less. Let's assume that \$50,000 of that is going for the support of your key personnel, your manager and your marketing arm. Given \$50,000, who can you really hire with that? So if you've got this one guy, probably what you have is the President, who also works as the manager and the marketing man. That means 50% of his time is devoted to each. If you waste his time going after MBE stuff and having an opportunity to bid, at the time that he ought to be following those established sources that he has, which at least keep him at a survival level, then you have substantially increased his potential for failure if there is no guarantee that anything is going to come out of his MBE efforts.

Now to prepare a bid, as you gentlemen know, costs anything from \$3,000 to \$10,000. Let's assume that it is \$5,000, and you are talking about an enterprise that is making \$100,000. Well, it has cost you \$5,000 for the great opportunity to bid. And you didn't make it. That decision has a tremendous impact on the success of your business.

I think what we are dealing with here is the way private industry and Government are interpreting the MBE program. If we can assume that the reason for an MBE program is that it is good public policy for this country to allow or increase or develop the business and industrial class in a minority community, and if this is good for the country, then we must assume not having to argue about that presumption; because if we can take that at face value, then if we have leadership in the minority community, we'll have resources, we'll have employment, we'll have all of those good things. And that this is where the emphasis ought to be, instead of on social programs or social service type programs.

At various times in our recent history we have developed this type of understanding with just about every foreign country on the face of the earth. We were very successful in Germany, we were very successful in Japan, not so successful in Latin America. But we have made those commitments and we know they have worked. Yet we have not met a similar kind of commitment to the minority communities in this country.

On the plane coming over here I was talking to an electronics engineer who was sitting next to me, and we were in an argument about the need for minority business enterprises. And he said, "What is the biggest single barrier to a minority business enterprise?" It was a loaded question and he wanted me to say "discrimination." That's not it. It's management, finances, marketing. This is the biggest barrier, not discrimination.

Discrimination plays a part, it certainly does obviously. Obviously, if you're a buyer and you have been dealing with a guy for many years, and you've played golf with him, and you live in his neighborhood, and you go to the same church, and his bid is a little higher than mine - he's going to be favored. That's human nature. But it is not necessarily discrimination. We have seen direct outward discrimination, but I am still saying that this is not the major obstacle. And if you put that aside and give us an opportunity to bid, that isn't going to do the job. Because what we are talking about is essentially about a subsidized program to get this objective. Unless we are committed to putting major resources into this effort, we will not develop a business and industrial class in the minority community. We have got to talk about some kind of major effort by the Government to support this kind of development.

Now let me toss out some of the solutions that have been considered as a way of revamping the MBE program as it applies to private industry.

There are many of us in the association who felt that the only way to do it is through a private industry set-aside program. Some of the

arguments that you get against this are: "We are not allowed to because of the procurement regs." Or "That does violence to the private enterprise system." And the list of all those old clichés goes on. But there are all kinds of ways of getting around these if there is a real commitment. There are all kinds of ways of bending, if you want to call it, bending the rules in this direction. If you don't want to call it a "set-aside program" let's call it "negotiated contracts."

Let's develop a way by which the Government does not necessarily have to suffer whenever a minority company gets a contract. The minority company can do the same job at about the same price, with about the same kind of quality, provided it is assured it can get the job. And I am sure that if you were to tell anyone of us businessmen here, "I can give you a \$100,000 contract to make pliers," he would find the proper engineers to do the job. With that kind of an assurance and with the assurance of a reasonable overhead rate and a reasonable profit, he could get into that business. And he wouldn't have to be in it for five years in order to come up with a decent pair of pliers.

So business is not that complex provided you are put into a position where you can take full advantage of it. The difficulty comes in making a commitment to put the minority manufacturer there and in getting him to that stage. And you cannot expect minority manufacturers to get to that stage in large numbers by themselves in a short period of time. It isn't going to happen.

Another way of revamping the MBE program is through R & D type contracts, which allow you some kind of flexibility in the procurement regs.

A third way is for private industry to contract with minority business associations and utilize them to match procurements with their members.

Now there is some resistance to this kind of solution. The Government has in effect subsidized industry and its own agencies to increase their MBE departments, so that these people will have the responsibility of increasing minority business participation. I don't think that is going to work, because, as Dr. Fletcher said when we were discussing this issue, the people that have the most to gain and the most to lose are the businessmen and the staff of these MBE departments themselves. How can I expect a Government employee to look after my interest in getting a contract, when, if I was put in his position, I'd do exactly what he is doing - worry about himself first.

So it seems to me that when Government increases the budget, what it's doing first of all is increasing its own personnel in the area of minority business enterprise development. And when it increases the budgets of the big industries so that they too can set up these departments, without equally increasing or putting that kind of money in the hands of the people - the minority associations or businessmen that have the most to gain or lose by whether or not they succeed at this - it makes a big difference.

Another favorite solution outside of set-aside contracting for private industry is the development of goals and quotas. Now all of us fear any kind of quota system. It's a sword that cuts both ways. It can limit you as well; it might give you that first step but it might limit you from that second and third. If we take a look at the experience that we have had with equal opportunity employment over the last eight or ten years, it wasn't until the Equal Employment Opportunity Commission was able to come into big industry and slap a suit on them for back wages of millions of dollars that you began to get results. Without some kind of clout like that we can expect the same frustrating experience in MBE for the next eight or ten years, until such time perhaps as a commission is set up with the authority to sue on our behalf. But that is going to be ten years away from now, and none of us is going to wait around for that.

So even though we have an awful lot to fear about goals and quotas, we have to recognize that there have to be some kinds of goals and they have to be met so that we have a yardstick by which we can judge whether or not we are making any progress.

Subsidizing has other aspects to it than just helping minorities. Let's assume that 10 companies are bidding on a Government contract, or even a subcontract from one of the prime contractors to NASA. If every one of these 10 companies also has Government contracts, then they are charging the Government a fee or amount out of the G & A or overhead rate. When they bid on that contract that \$10,000 that it costs to put that proposal and bid together is being paid out of tax money when you're talking about an ongoing company that is already, in effect, on the contract payroll of the Government.

So if you look at it from that position you are already subsidizing the bidding proposals. You have to take into account what it costs the Government to get that successful bid and what it pays for the other nine bids that were not successful. A company that is big enough to be into and part of the aerospace industry is charging that to the Government. I think subsidizing minority firms is not in any way out of line when you consider that point. The arguments that are often given against a set-aside for a particular group are that it restricts competition, that it goes against the free enterprise system, and that you can't find anyone to stand for any portion of a contracting budget being reserved for a particular group.

But let's take a look at what has really happened. Let's take a look at the space shuttle program. Now if you do an analysis of it since its inception, you find that the firms that are into that program are the very firms that were there in the NASA program prior to that. I was going through the directory in which NASA lists its regular sources of procurement and as I peeked through it I saw sections like "systems analysts,"

"integrated electrical systems," etc.; and as I went through the sections, I picked out one name consistently - Philco-Ford - in every one of those fields. Okay, they're going to get a piece of the action. They always have, they always will. Now if that isn't set-aside, I don't know what you call it!

When I was talking to the Jet Propulsion Lab people, they said: "Gee, we do our planning several years in advance. We really don't have anything for your firm, but you could begin to work on something for 1977." So I said: "But you just told me you can't direct procurement to firms." "Well, we are not directing them. It's just that these people were involved in the engineering stage, now they are involved in the production stage, and after that they will be involved in the evaluation stage." Well, I won't be here in 1977, because I'll be broke. So the whole argument on set-aside is ridiculous. We know that it is happening. And it doesn't take a blind man to figure that out.

Let me go back to describing what a minority business enterprise goes through over a period of a year. My experience may not be typical because by and large most minority firms are not at the sophisticated level that my company is; so that, if anything, they have faced even more difficulties than I have faced. And probably they have less results. But hopefully you will begin to understand why we developed such a thing as the LAMA aerospace industry strategy. It was this kind of frustrating experience that led us to conclude that, as a small groups with very little resources and power, we would have to utilize some of the old techniques that were developed in the civil rights movement and apply them to industry; that we were going to have to utilize, in effect, the techniques that were developed in the South and Southwest to try to get these institutions and this Government to respond properly to our concern. We used to call them social guerilla warfare tactics.

And so we very deliberately looked at the Government and said: "Let's find an agency that is visible, let's find an agency that is vulnerable, let's find an agency that may be sympathetic, and let's concentrate on that agency." We looked at the Department of Transportation; we looked at the Department of Defense. No way; they are powerful outfits. And we looked at NASA. As the child picks on his parents first, or a young man picks on his boss first, or you pick on your friends first since you know them better, so we selected NASA. And I want to congratulate you on that. The reason for selecting NASA is that it's a small agency. It can make decisions faster. It has a very visible program - the space shuttle program; and that's the program we selected.

Rockwell International has a good portion of the space shuttle program, and I've had an extensive working relationship with Sy Gottlieb and some of his people. But we've been very candid about our approach. We've said: "All right, this is a program that is visible, it's a program that is going to get a great deal of PR, and it's a program that is in the balance. The space program in general is in the balance. It's being evaluated by the public who are questioning whether we can truly afford this kind of extravaganza." When the space shuttle program was initiated and contracted out, one of the things that went into it was that it was supposed to have some kind of social-economic concern along with a payoff in technology. It is for this reason that so much was made of that clause in relation to minority business enterprise participation.

Almost a year ago today, I was discussing with Mr. Steve Nelson, head of procurement at the space division of Rockwell, how Rockwell went to great lengths to put together a package which would assure the Government that the social-economic goal for this administration would be carried out, because that was going to be part of their proposal and therefore part of their contract. All of the other companies that were bidding did just the same thing. I know because the losing companies allowed us to look at their

proposals and had some of their technicians brief us. This was how we began to understand the space shuttle program.

Consequently, we felt that we had the right - affirmed by Congress and by a commitment of this administration - to a stake in NASA and the space shuttle program. And so we went out to claim that which we felt was ours. We approached NASA and we talked about those states where much of the space shuttle program, much of the aerospace industry, is concentrated: California, Texas, and even Florida. We told NASA we would like to be able to get those Congressmen that the Spanish-speaking people put into office from these states to heavily support the space shuttle program. And one of the first things that was often mentioned was: "Where was your Congressman on this issue? He voted against the space shuttle program."

I can't speak for any Congressman, but I can speak for how some of his constituents feel. They feel that until such time as they have an interest in that program, other than just a job, they are going to counsel their Congressman that he should best vote on social programs, where at least they can see money going direct into their communities, than on money for the big aerospace industry. Until that thing changes, they are not going to ask their Congressman to change his vote. Until such time as we have something to gain and something to lose, how can you expect us to participate in supporting the space shuttle program?

Those are some of the things we feel we can look to NASA for. We also feel that by working with NASA we can show the other agencies what success can mean in terms of minority business enterprise. We can show the generals and the colonels that are going to take a long time to come around, that it can be done because it was done in NASA.

And so if you look at it positively, we are putting a tremendous burden on you and on ourselves to work together to really make it meaningful.

In closing, let me just say a few things about what may be a new area, this technology transfer, and tell you that I am encouraged by it. If we can find an area in the economy where we know that expansion is going to occur, then we have a better chance of entering there than in trying to take the contracts from those firms that already have them. We understand that. Now if we have to do the latter, we must. But obviously the job is easier if we can get into a new area where the economy is growing. I see this concept of NASA's technology transfer as just such an area, and I'm very hopeful of it.

But there are other major problems that have to be dealt with. Even if I had the best mousetrap in the world - and you've all heard that story - unless there is financing for it, and production and marketing, there is no way that I can penetrate the national market. And if I'm not into the national economy, I'm not into the economy. Period. And so, as we get into the seminar and as we talk about these kinds of things, we have to keep in mind that it has to be a total opportunity. You can't give a man just a bolt in the entire machinery and expect him to develop a machine from there. If we are talking seriously about developing a strong business and industrial minority base then we come back to the very same notion: the money has to be spent and the commitment has to be made first by the Government, and the Government must enforce it on private industry.

Let me say that I appreciate very much the reception that LAMA has been given by NASA and by some of the prime contractors of NASA. We see some light at the end of the tunnel and I hope it isn't going to take as long as that other battle.

THANK YOU VERY MUCH.

APPENDIX D:

MATERIALS USED IN WORKSHOP PRESENTATIONS

WORKSHOPS 1 AND 2

The NASA Regional Dissemination Centers - One-Stop Service For Industry

Address by P. J. Chenery, Director, NC/STRC

at the NASA OMBE Seminar, College Park, Maryland
June 4-5, 1974

Hamilton
Mr. ~~Emley~~, in his introductory remarks, has referred to NASA's ①

Technology Utilization Program, which employs a variety of methods to make innovations and new technology developed in the space program available to industry and the public sector for additional uses. ~~Mr. McGowan~~ Mr. Parker ^{has} ~~have~~ described NASA's patent policy and licensing procedures in some detail.

It is now my task to explain how you can find the technical information and assistance which is necessary to evaluate, to develop, and to ^{manufacture a new product.} ~~use a patent.~~ To do this, let me first describe briefly the entire technology utilization program at NASA.

When Congress established NASA, it was recognized that much of the technology developed to put man in space would also be useful back on earth. ②
This photograph of the North Carolina coast, taken from Apollo 9 as it orbited the earth 120 miles up, would not have been possible without hundreds of innovations in everything from materials to instrumentation and communication techniques. ③ This silicate-based paint which is seen here, on a metal disc which has been heated white-hot by the flame from the torch, is an example of a new material developed for the space program which has found wide application commercially. NASA has issued more than 30 licenses to manufacture this paint for a variety of high temperature applications. ④ In writing the Space Act of 1958 which created the National Aeronautics and Space Administration,

Congress directed that NASA should provide for "the widest practicable and appropriate dissemination concerning its activities and the results thereof." To carry out this mandate, ⁽⁵⁾ NASA created its Technology Utilization Program. The objective of this program was and is, to make readily available for additional public or private uses, the entire results of our space program.

Technology Utilization makes use of a number of different methods to inform the public about space innovations. ⁽⁶⁾ One with which many of you are familiar is the Tech Brief, a one or two page description of a new development. Many Tech Briefs describe inventions which have been or are in the process of being patented. ⁽⁷⁾ Another method used is the survey report on new techniques, such as this one on non-destructive testing, or ⁽⁸⁾ this on the state of laser technology.

⁽⁹⁾ Computer programs developed for use in space research are collected by a Center at the University of Georgia, verified to be sure all the necessary information is available, and then announced in this publication. ⁽¹⁰⁾ NASA supports several applications teams which look for solutions to problems in fields such as medicine, or the public services provided by local government, and ⁽¹¹⁾ then match these problems with available NASA technology.

⁽¹²⁾ A major part of the Technology Utilization Program is carried out by a network of six Regional Dissemination Centers. ⁽¹³⁾ As you see, the Centers are

located at selected universities across the country. Each Center has similar resources and provides a variety of services to industry in its surrounding region. The COSMIC Center at the University of Georgia is the exception, specializing in computer programs; it does not provide any other services.

(14) For a picture of how a Regional Dissemination Center operates, let's look (15) at the North Carolina Science and Technology Research Center. (16) Located in Research Triangle Park, midway between the university cities of Raleigh, Durham, and Chapel Hill, (17) we provide a number of services for industry. (18) Retrospective searches are made for technical information on specific topics of interest to a particular company.

(19) Current awareness service reviews all technical publications in a particular field for information on a specific topic. (20) Referral service helps companies to find sources for special materials or services; for example, consultants who are expert in a particular field. (21) Applications Engineering assists a client in modifying technology which offers a potential solution to a client's problem, to meet the special requirements of his application. (22) Workshops and seminars, such as this one you are attending, are held periodically to inform industry about various kinds of new technical development. (23) And finally, we offer the service of providing full copies of scientific or technical documents identified by any of our search services.

That is an imposing list of services, but services are no better than the resources on which they are based. Our resources are of three kinds: people, facilities and equipment, and information collections. (24) Our first information resource

was the NASA Scientific and Technical Information System, created by NASA for the use of its own research scientists and its contractors. (25) The basic collection consists of technical reports both from NASA, its contractors, and also from universities, research institutes and organizations in all countries of the world. (26) The second part of the basic collection consists of journal articles and conference proceedings worldwide. (27) The scope of coverage of the NASA information system is very broad, as you can see (28) from this listing of general categories. Not only do we find specific fields such as aerodynamics, aircraft, propulsion systems, space vehicles, but also the very general areas of materials, mathematics, the biosciences. But, broad and strong as this information system is, it is not always sufficient by itself to supply all of the technical information needed by industry. So, some years back, we began to supplement the (29) NASA information collection with other government reports collected by agencies such as the Department of Defense, the Department of Transportation, Health, Education and Welfare, the Atomic Energy Commission, etc. Then we added the (30) Engineering Index, which provides access to a very large collection of articles taken from almost all of the engineering professional society journals. (31) We added Chemical Abstracts, (32) which indexes and announces literature for the entire field of chemistry. (33) Food science and technology is covered through this collection. (34) As we became concerned with the environment, we added information resources dealing with water and air (35) pollution. Our Center is located in a state where textile manufacturing is the most important industry; in fact, we lead the nation in textiles, (36) so we have added two (37) collections of textile literature.

(38) All of the information collections which we have, have been indexed for fast searching by high-speed computers. We are fortunate in having located at our

Center a very large computer installation, ⁽³⁹⁾ owned jointly by the three Research Triangle universities, and we make use of this computer to search for technical information for our clients.

But information resources by themselves are not very useful. To put them to work effectively, we must have trained professionals who are specialists in a variety of fields. ⁽⁴⁰⁾ Here you see our three chemists; one is a biochemist, one an organic chemist, and one a chemical engineer. They have experience in the field of textiles, food chemistry, pharmaceuticals as well as other related areas. ⁽⁴¹⁾ Here are three of our engineers; the fields represented include metallurgy, mechanical engineering and industrial engineering. ⁽⁴²⁾ Our industrial engineer also teams with these engineers who are specialists in environmental controls, biomedical engineering, and electronics.

⁽⁴³⁾ Our computer search system is maintained and improved by a staff of professionals. Using terminals such as these, ⁽⁴⁴⁾ we can search information bases both at our Center or at other Information Centers across the country. ⁽⁴⁵⁾ We have extensive files of abstracts of articles identified by computer searches, ⁽⁴⁶⁾ and for the NASA file, we have the complete text of most of the reports available on ⁽⁴⁷⁾ microfilm ⁽⁴⁸⁾ for viewing or reproduction. ⁽⁴⁹⁾

If the question we are asked cannot be answered by searching the information resources which we have, or through the professional knowledge

of our staff and consultants at local universities, we can go to the many NASA Field Centers across the country for assistance. Our staff is aware not only of the general research interests of each NASA Field Center, but of the specific research projects being carried out there. If we receive a request for information on a subject on which NASA is conducting its own research, we can go to that Field Center for additional assistance. An example is the collection of techniques for making reliable electrical connections developed at the Marshall Space Flight Center. Although techniques are described in this handbook, illustrations and special tools and training courses are available at Marshall. Our Center conducted a workshop for industry, and with assistance from Marshall, prepared an illustrated training program which was taken to numerous industries to inform their workers of these new techniques.

Another example of technology developed for the space program is the use of various kinds of electroplating to provide needed properties for parts that must survive the space environment. These plating techniques have been applied to commercial parts to make them last longer and function reliably. Assistance in applying these new plating methods can be obtained, through our Center, from the NASA Centers where they were developed.

I should emphasize that the Regional Dissemination Centers function as a network, sharing information resources to avoid duplication and making the special capabilities of one Center available to all of them. To be useful, our services depend heavily on good communication between the Center and our clients. For this

reason, most of our clients are found in the Southeastern region. If we require special expert available at another Center, we will act as liaison to obtain the needed information or service. In the same way, we will provide access to information or expertise at any of the NASA field Centers. Although what I have said describes the way we operate at the North Carolina Science and Technology Research Center, the organization and staff of the other five Centers is very similar, and our joint resources are available through any Center.

You will have an opportunity during the workshop sessions this afternoon to discuss your specific interests or questions with ~~several~~^a member^s of our staff who ~~are~~^{is} here. Let me emphasize two things about our services. First, our staff is made up of professionals who have worked in commercial industry. They are aware of the need for business to make a profit, and the need to keep company plans and research interests confidential to protect proprietary rights. Any information we obtain about your company is held confidential unless you tell us otherwise.

(56) My second point is that this is not a new program. North Carolina Science and Technology Research Center began operations in 1964; this is our tenth year of serving industry throughout the Southeastern United States. Because our services are tailored to the needs of each individual client, we do charge for our service. I think you will find the rates are very reasonable, since

they cover only our direct out-of-pocket costs for computer time and professional time in searching for answers to your questions. The fact that our income for services has continued to grow throughout our ten years of service is, I think, one measure of the value which our clients place on our services. Our Center receives major support from NASA and from the State of North Carolina; this support carries the overhead, and our users pay only the direct costs of the services they receive.

(57) In conclusion, the NASA Regional Dissemination Centers provide a single access point through which industry can tap the results of forty billion dollars worth of space research. We are information professionals: we understand the needs of industry for new technology, new products, new manufacturing processes. We know the characteristics of our various information resources, and how to use computers to identify and retrieve that specific information which may solve your problem. We are not newcomers; we have been finding answers to industry's questions for ten years. We understand the need to protect your proprietary interests. If we can't find the information you need, we know where to look in other organizations for possible assistance. (58) NASA I hope that you will give us a chance to help your companies to benefit from the results of our national research effort.

Outline of Presentation by Gayle Parker at the
NASA Technology Transfer Seminar, June 4, 1974

NASA PATENT LICENSING PROGRAM

Introduction

Purpose of presentation

Coverage of presentation

Requirements of Space Act

Discussion relates to individual items of technology

NASA Patent Policy

Define patentable invention

Describe patenting process

Define rights of patent owner

NASA Invention statistics

NASA Patent Licensing Policy

Prior to NASA patent licensing regulations

NASA patent licensing regulations

Licenses available from NASA

Terms and conditions of patent licenses

How to Find NASA Inventions and Other Technology

NASA publications

NASA Patent Abstracts Bibliography

Examples of NASA Technology and Licenses

Some actual case histories

INTRODUCTION

All of you have seen the televised launching of at least some of the large space bound rocket ships from the Kennedy Space Center and seen these large packages of NASA technology headed for outer space.

We welcome this opportunity to spend some time with you and show how at least some of this very sophisticated technology can be brought directly to you and how you can share in the results of NASA's aerospace developments.

Numerous publications describe in great detail how many of these aerospace developments have already found use here on ~~XXXXXXXXXXXX~~ planet Earth.

Today, within the limits of our time we will describe some of the NASA capabilities in bringing this technology to you, give you some examples of how it has worked for others and what it can mean to you.

My special part of this program will deal primarily with new developments, new inventions, technical items that hadn't been discovered before NASA discovered them.

And being an attorney, I am especially involved with how the laws and the regulations under which NASA operates are designed to encourage the widest possible use of NASA technology.

I plan to show you briefly how NASA has been able to utilize the U.S. patent system and particularly a viable patent licensing policy as an incentive to encourage American companies to develop, market, and benefit from new items of technology resulting from NASA's vast research and development activities.

Without such a program as this, many of these developments would have been unidentified, much less recorded, patented and made available to the American public.

NASA has begun to actively promote its technology by holding a variety of conferences in various cities. This is a small conference here today specifically designed to assist your group in finding technology.

We have had large conferences in Los Angeles, Boston, Jacksonville, and we will be going to Chicago and Salt Lake City.

Today I will discuss briefly:

- Philosophy of the NASA program
- Sources of NASA inventions and technology
- NASA patenting and licensing policies
- How you can locate inventions
- How you can obtain licenses
- Examples of some licenses we have already granted

In 1958, the Congress passed the N-A-S- Act of 1958:

Established NASA

Required NASA:

- To conduct Aero & Space activities for benefit of
- Make most effective utilization of sci & tech resour
- Require for reporting of all improvements, innov &
- Provide for the widest possible dissemination of
- Obtain patents for inventions
- Protect the inventions
- Determine & promulgate licensing regulations

Space research has produced extremely broad range of benefits

Contrasted with large programs: Manned space - satellite

Many thousands of individual items

Its these individual items

What these inventions are

How you can find them

How you can obtain a license

How you can benefit

NASA is primarily an R&D organization

R&D performed:

American industry under contract
Universities and non-profit organizations
Government laboratories

Space Act required that all inventions "made" be reported
Full & complete disclosure

Many inventions : only concepts
Some : laboratory models
Some : used by NASA

In early 1960s, NASA discovered that many inventions
had commercial potential
Needed some program to identify and evaluate

In 1963, NASA established the NASA Technology Util. Program
Identify, Evaluate, Retrieve, Disseminate

NASA has a Hqtrs in Washington and 10 major installations
Each installation has Patent Counsel and Tech. Util. Off.
Close coordination

SLIDE #1

Installations

SLIDE #2

Flow diagram

NASA PATENTING POLICY

Because we are discussing the licensing of patentable
inventions:

"A patentable invention is any new and useful process,
machine, or composition of matter or any new and useful
improvement thereof"

U.S. Constitution, Art. I, Sec. 8:

"Congress shall have the power to promote the progress
of science and useful arts by securing for limited
times to inventors the exclusive right to their
discoveries."

Patenting process:

Inventor makes an invention
Inventor realizes he has made an invention
Inventor tells his employer he has made an invention
Company patent attorney makes a search of the technical
Company patent attorney files an application for patent
U.S. patent examiner then determine whether it is
new, useful and unobvious
Patent issues to inventor or the company

Rights of patent owner

17 years

Right to exclude all others from making, using & selling

U.S. Courts will help him protect his rights

Use it himself Exclude all others

License one or more others to use invention

Do nothing

Until 1962, when patent issued to gov't agency

Gov't agency did nothing

Might have used invention

Didn't take advantage of the patent

In 1962 NASA issued licensing regulations 1972 NEW REGS

NASA could grant exclusive or nonexclusive licenses

Exclusive license is granted to only one company

Nonexclusive licenses can be granted to several companies

Purpose of NASA licensing regulations was to make use
of the patent right of exclusion to get the inventions
on to the commercial market.

Many inventions were used in government programs but
nonone would take the time or effort to make commercial
use of them

Some of the NASA inventions have been fully developed and
are practically ready for the commercial market

Others are not ready for the commercial market and require
investment of much time and effort and money.

For example:

ANTI-Fog Composition

Life Raft

NASA patenting procedure:

- Require inventions to be reported**
- Evaluates the technical significance**
- Files patent application in U.S. patent office**
- Patent issues to NASA**
- NASA can license the patent during 17 years**
- Exclusive or nonexclusive**

Statistics:

33,000	Received
2,800	Patent Applications Filed
2,300	Patents issued to NASA
500	Patent applications pending
235	New patent applications filed each year

NASA PATENT LICENSING POLICY

Prior to NASA licensing regulations

Traditional gov't policy:

Taxpayer paid for it Public domain let all use

Result: very few were used

No companies were encouraged to use inventions

NASA policy different

Use the patent rights as it was intended to be used

"Use the right of exclusion"

When NASA has a patent for an invention

grant a license to one or more companies

**Any company that does not have a license is excluded
from using the invention**

Those companies that have license are encouraged

Exclusive: all others are excluded

Nonexclusive: all companies not licensed are excl

OH
EIC. REGS.

April 1, 1972 Licensing Regulations

Read: "NASA owned inventions

" Although

"It is NASA

SLIDE #3

Types of Licenses

SLIDE #

Licensing Considerations

Nonexclusive

SLIDE #

Exclusive

SLIDE #

Nonexclusive Short-Form

OFF

Application For License Form

File anytime

Show capability

Show plans & intentions

granted only to responsible licensees

Terms and Conditions:

Period of years to be negotiated

Licensee agree to make practical application

NASA can revoke

Royalties

Exclusive

Non exclusive

Exclusive licensee must invest money

Annual reports to NASA

No implied licenses READ

Require to use best efforts

Field of use

HOW TO FIND TECHNOLOGY

Most common question: "What do you have?"

We can now answer that question quite nicely
Thanks to computers

NASA publicizes its technology

NASA Tech Briefs

Abstract journals

NASA PAB

Lists of inventions in Federal Register
Official Gazette

Publications of NTIS

Government Publications

SLIDE #

Discuss NASA Patent Abstracts Bibliography

Abstracts 2600 inventions 33 technical categories
Index

Available from NTIS \$13.50

EXAMPLES OF TECHNOLOGY

6 SLIDES

"Far Out Technology"

Examples of licenses

Life Raft

Frangible Tube

Visual Exam Apparatus

Transducer Circuit

Self Lubricating Material

Fastener

Anti-Fog Composition

Micro-packed Column

Silent Emergency Alarm

Auto Attendance Accounting System

All of NASA inventions in a computer system

Can be retrieved according to technical subject matter

PRESENTATION OF SOURCE SELECTION PROCEDURE

AND

RECOMMENDATIONS REGARDING THE GSFC INDUSTRY ASSISTANCE
OFFICES SERVICES

1. PR FLOW
 - A. PREVIOUS PROCEDURE
 - B. PRESENT PROCEDURE
2. DOCUMENTATION REQUIREMENT
 - A. ADEQUATE DESCRIPTION (WORK STATEMENT)
 - B. SOURCE RECOMMENDATION
 - C. JNCP
3. EXPLANATION OF STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE
 - A. PRODUCT SERVICE
 - B. R&D
4. SMALL BUSINESS SET ASIDES
PPC CODES: GA GS, JA JS AND PS **
5. MINORITY (8(a)) - BRIEF INTRODUCTION TO SUBJECT
6. LABOR SURPLUS
7. HOW WE CAN HELP
 - A. PRE PR NOTICE (INFORMAL)
 - B. DISCUSSION OF REQUIREMENT
 - C. PRE SOURCE SELECTION INFORMATION TO ESTABLISH
APPROPRIATENESS OF SMALL BUSINESS SET ASIDES OR
8(a) POTENTIAL

8. CONTRACTOR EXPERIENCE

A. CENTER

B. NASA WIDE

9. PRE AWARD SURVEYS

A. DCAS/DCAA

B. IN-HOUSE

C. JOINT DCAS/GSFC

** GA - Small Business, Individual Set Aside. Negotiated Competitive.
Authority #1 - National Emergency

GS - Small Business, Individual Set Aside. Negotiated Competitive.
Authority #17 - Otherwise Authorized By Law

JA - Small Business, Class Set Aside. Negotiated Competitive.
Authority #1

JS - Small Business, Class Set Aside. Negotiated Competitive.
Authority #17

PS - Small Business, Negotiated Noncompetitive. 8(a). SBA
Authority #17

Attachment 1

See Page 2 # 9

I. Does the Contractor have currently approved systems for:

1. Purchasing
2. Estimating
3. Subcontract Management
4. Small Business Subcontracting
5. Equal Opportunity
6. Property Management
7. Accounting
8. Industrial Health and Safety
9. Product Assurance and Reliability

II. Past Performance

Provide available data respecting:

1. Response to technical directions and change orders including timeliness of proposals
2. Compliance with contract specifications
3. Accuracy of cost estimates, Underrun/Overrun record
4. Quality and timeliness of business reports
5. Delivery performance
6. Termination - Identify any terminations for default
7. Product acceptability

III. Manpower Stability

1. Labor relations - Describe any recent or foreseeable labor interruptions
2. Is contractor plant in a Labor Surplus Area?

IV. Accounting Standards Board Disclosure Statement Required by PL 91-379

1. Provide one copy

NETWORKS EQUIPMENT

o TOTAL FY 1974 BUDGET - \$ 23.6 MILLION

o EXAMPLES OF SMALL BUSINESS PROCUREMENTS -

RACK CABINET	\$ 7 K
ANTENNA	12 K
PRINTED CIRCUIT BOARDS	5 K
TEST RECEIVER	5 K
TIME INTERVAL METER	7 K
FEED THRU PANELS & TERMINALS	13 K
OSCILLOSCOPE	8 K

SUPPORTING RESEARCH AND TECHNOLOGY

TOTAL FY 1974 ART/SRT BUDGET	\$ 24M
TOTAL ACTIVE LINE ITEMS	1,400
AVERAGE PROCUREMENT	\$ 14K

EXAMPLES OF PROCUREMENTS:

	<u>AMOUNT</u>	<u>REQUIRED BY</u>
COMPUTER MAINTENANCE	\$1,500	ENGINEERING DIRECTORATE
STUDY OF HIGH FREQUENCY PULSE CHARACTERISTICS	10,000	SCIENCES DIRECTORATE
THERMAL-MECHANICAL STRAIN ANALYSIS	8,000	MISSION & DATA OPS. DIRECTORATE
DEVELOPMENT OF DESIGN CRITERIA MONOGRAPHS	9,000	SYSTEMS RELIABILITY DIRECTORATE

#

HIGHLIGHTS

PREVIOUS MONTH UPCOMING MONTH

CONTRACT COST GROWTH:

Summary data on 11 major contracts as of 3-31-74:

Basic Contract Value	\$333.6M
Additional Scope	15.6M
Within Scope Changes	101.8M
Overrun	<u>82.4M</u>
Definitized Total Cost	533.4M
Additional Estimated Cost	<u>70.2M</u>
Estimated Cost at Completion	\$603.6M

Trend continues toward reduction of undefinitized work.

Our peak of \$136 million is now down to \$70.2 million

WORKSHOP 3

THE UNSOLICITED PROPOSAL

Charlotte Spann

- An Opportunity to Participate in NASA Sponsored Research -

- ° What is NASA Sponsored Research?
 - ° It is fundamental in nature
 - ° It is relevant to NASA
 - ° It encompasses a unique idea
- ° Who proposes research for NASA sponsorship?
 - ° An educational institution
 - ° A non-profit research organization
 - ° A commercial organization with research capabilities
- ° How are unique research projects proposed to NASA?
 - ° Unsolicited Proposals for long-term research
 - ° Unsolicited Proposals for short-term studies
 - ° Responses to announced NASA Space Flight Experiment Opportunities
 - ° Unsolicited Proposals for Training Opportunities
- ° How are research projects accepted and sponsored by NASA?
 - ° Research Grants
 - ° Training Grants
 - ° Negotiated Research Contracts

References:

- SELLING TO NASA, NHB 5100.1A, September 1971.
(May be obtained free from any NASA Installation)

- A GUIDE TO POLICIES AND PROCEDURES FOR SPONSORED RESEARCH,
NHB 5100.3, January, 1971.
(May be obtained free from any NASA Installation)

- NASA GRANT HANDBOOK, NHB 5800.1, January, 1970, as revised.
(For sale by the Superintendent of Documents, U. S. Government
Printing Office, Washington, D. C. 20402)
Approximately \$15.00.

- NASA PROCUREMENT REGULATION, NHB 5100.2, March 1970, as revised.
(For sale by the Superintendent of Documents, U. S. Government
Printing Office, Washington, D. C. 20402)
Subscription \$59.00.

- NASA, U.S. GPO:1971 O-471-630
(For sale by the Superintendent of Documents, U. S. Government
Printing Office, Washington, D. C. 20402 - Price 20 cents)
Stock Number 3300-0462.

Contacts at NASA Headquarters, for:

PUBLICATIONS -

NASA Headquarters
Office of Public Affairs
Code: FAM/Mr. William Detrich
Washington, D. C. 20546

UNSOLICITED PROPOSALS -

NASA Headquarters
Office of University Affairs
Proposal Control/Code: PY
Washington, D. C. 20546

CONTRACT AND GRANT BUSINESS ADVICE -

NASA Headquarters
Contracts Division
Code: LC/Mr. Herbert S. Snyder
Washington, D. C. 20546

APPENDIX E: EVALUATION SYSTEM DESIGN

EVALUATION SYSTEM

1. Design

a. Behavior to be measured

- (1) Acquisition of skills and readiness to use information as defined by workshop objectives
- (2) Verbal response to seminar management
- (3) Verbal response to site conditions/facilities

b. Indicators to be used

- (1) Achievement of workshop objectives (or subobjectives, if available)
- (2) Verbal responses to questions on scheduling, conduct of sessions/workshops, evidence of planning for participant benefit, opportunities for participant involvement, and the like
- (3) Verbal responses to questions on handling of room reservations, room quality and comfort, motel services, location of motel in relation to needed and/or desired services, food quality, selection, service at luncheons, and the like

2. Instruments

a. Participant Questionnaire

(1) Content

- (a) Achievement of listed workshop objectives - yes/no
- (b) Verbal response to seminar management - rating scale
- (c) Verbal response to site conditions/facilities - rating scale

(2) Format: self-explanatory; to be completed by each participant

(3) Administration

- (a) Responsibility: ETI
- (b) Time required: maximum of 20-25 minutes for all participants meeting together
- (c) Time needed on schedule for administration: prior to lunch, Wednesday, 6/5/74; 11:30 a.m. would be desirable
- (d) Place of administration: Prince George Room

b. Participant Interviews

(1) Content

- (a) Four (4) generally phrased oral questions based on stated participant goals
- (b) Oral indication that interviewee may respond as he chooses

(2) Format: Questions from interviewer; response from interviewee; both taped

(3) Administration

- (a) Responsibility: ETI
- (b) Time required, each interviewee: five (5) minutes
- (c) Number of interviewees: minimum of ten (10) percent of total number of participants
- (d) Time needed on schedule for administration: ETI will plan schedule for administration: ETI will plan schedule so as not to disrupt seminar activities
- (e) Place of administration: Room C
- (f) Selection of interviewees: ETI, with approval of NASA COTR (Objective: representative sample of participants)

c. Observer Questionnaire

(1) Content

- (a) All sections of participant questionnaire
- (b) Comments section - open

(2) Format

- (a) All but last section same as that of participant questionnaire
- (b) Comments section: space for any comments observer wishes to make

(3) Administration

- (a) Responsibility: ETI
- (b) Time required: to be arranged with each observer
- (c) Place of administration: as per management with each observer
- (d) Selection of observers: ETI, with approval of NASA COTR (Objective: observers who are professionals with conference experience but who have had no direct involvement with seminar planning or conduct)

3. Development Timetable for Evaluation System

- a. Thursday, May 23, 1974: NASA review and approval of suggested design and instruments detailed above
- b. Thursday, May 30, 1974: NASA review and approval of forms design for instruments

GOALS

FOR SEMINAR PARTICIPANTS

1. To discover how your company/organization can benefit from available NASA technology
2. To learn how to meet NASA requirements for receiving contracts and grants
3. To find out how to use the business assistance offered by OMBE-funded organizations
4. To gain information on subcontracting opportunities with NASA prime contractors and other majority firms

GOALS FOR
SEMINAR
PARTICIPANTS

PARTICIPANT OBJECTIVES

Workshops 1 and 2

The NASA TU Program -
An Overview

GOAL #1

Participant Objectives:

- (1) What the TU Program can mean to your business
- (2) Solving technological/production problems through the RDC
- (3) Gaining access to available patents through licensing

Workshop 3

Government Marketing
and Procurement

GOAL #2

Participant Objectives:

- (1) How you can sell to NASA/Federal Government
- (2) How NASA develops sources and evaluates proposals
- (3) How to be responsive to NASA needs/RFP's, including pricing
- (4) What you need to know about NASA contracts and grants, including R and D opportunities

Workshop 4

OMBE Marketing and
Technical Assistance

GOAL #3

Participant Objectives:

- (1) How you can utilize the marketing expertise and technical assistance provided by OMBE-funded organizations in your area
- (2) Answering your questions on getting help from OMBE-funded organizations

GOAL #4

Workshop 5

Private Sector Marketing
and Procurement

Participant Objectives:

- (1) How majority corporations utilize
NASA's TU System
- (2) Subcontracting opportunities for you
with majority firms
- (3) How to develop subcontracts with NASA
prime contractors

APPENDIX F:
EVALUATION INSTRUMENTS

Participant Questionnaire
Participant Interview
Observer Questionnaire

TECHNOLOGY AND OPPORTUNITY
A NEW APPROACH FOR MINORITY BUSINESS

PARTICIPANT QUESTIONNAIRE

Participant Information

1. Participant Identification

a. Kind of business I represent

b. Kind of organization/institution I represent

OR

2. Previous Contact with NASA

Please mark X in box showing source of contact, if any.

a. General informational literature

☐

b. Media (print, radio, TV)

☐

c. New technology publications

Tech Briefs

☐

Tech Compilations

☐

d. New technology dissemination

RDC (Regional Dissemination Center)

☐

COSMIC (Computer Software Management & Information
Center)

☐

Public Sector Application Teams

☐

Application Engineering Projects

☐

3. Previous Contact with OMBE

Please mark X in box showing source of contact, if any.

- a. General informational literature
- b. Media (print, radio, TV)
- c. Business development publications

☐
☐
☐

d. OMBE-funded organizations

BMD (Business Management Development organization)

BRC (Business Resource Center)

CCAC (Construction Contractor Assistance Center)

CSS (Contracted Support Services organization)

LBDO (Local Business Development Organization)

MB & TA (Minority Business & Trade Association)

NBDO (National Business Development Organization)

PRP (Private Resource Program)

State OMBE

☐
☐
☐
☐
☐
☐
☐
☐
☐

I ACHIEVEMENT OF WORKSHOP OBJECTIVES

The following questions are an opportunity for you to express your opinion on how useful the workshops were to your business/organization. Your answers will enable the sponsors to improve the design of future seminars. Please mark an X in the box which best represents your opinion.

Workshops 1 and 2: The NASA TU Program: An Overview

YES

NO

1. Do you understand how the TU (Technology Utilization) Program can be used as a resource for your business/organization? ☐ YES ☐ NO
2. Could you locate and use the services of an RDC (Research Dissemination Center) to solve a specific technological/production problem for your business/organization? ☐ YES ☐ NO
3. Do you know who to see and how to go about getting a license to use a NASA patent? ☐ YES ☐ NO

Workshop 3: Government Marketing and Procurement

4. Do you now understand the range and kinds of NASA activities well enough to know whether your business/organization could sell its capability to NASA? ☐ YES ☐ NO
5. Do you know how NASA identifies sources for contracting capability? ☐ YES ☐ NO
6. If your business/organization submitted a proposal/bid to NASA, do you know how it would be evaluated? ☐ YES ☐ NO
7. Could your business/organization submit a proposal/bid that would be technically acceptable? ☐ YES ☐ NO
8. Would such a proposal/bid be acceptable in its management information? ☐ YES ☐ NO
9. Would the proposal/bid satisfy NASA in its pricing information? ☐ YES ☐ NO
10. Do you understand the kinds of contracts and grants NASA awards well enough to decide whether or not your business/organization qualifies for either? ☐ YES ☐ NO

Workshop 4: OMBE Marketing and Technical Assistance

- | | YES | NO |
|---|-----------------------|-----------------------|
| 11. If your business/organization needed the kinds of assistance OMBE-funded organizations offer, would you know where to locate the nearest one to you and whether or not it offered the specific help you needed? | <input type="radio"/> | <input type="radio"/> |
| 12. If you asked questions about OMBE-funded organizations during the seminar, were these questions answered to your satisfaction by OMBE representatives? | <input type="radio"/> | <input type="radio"/> |

Workshop 5: Private Sector Marketing and Procurement

- | | | |
|---|-----------------------|-----------------------|
| 13. Do you understand how majority corporations use NASA's TU System in their development and production activities? | <input type="radio"/> | <input type="radio"/> |
| 14. Do you know who to see and how to go about developing a subcontract with the majority corporations represented at the seminar? | <input type="radio"/> | <input type="radio"/> |
| 15. Could you now decide whether your business/organization is capable of arranging a subcontract with NASA prime contractors represented at the seminar? | <input type="radio"/> | <input type="radio"/> |

COMMENTS

If you wish to make comments, please use the space below.

II SEMINAR MANAGEMENT

The following questions will give you a chance to express your opinion on how the seminar was planned and conducted. Your answers will enable the sponsors to manage future seminars better. Please mark an X in the box which best represents your opinion.

1. The scheduling of general sessions and workshops was:

Convenient	<input type="radio"/>
Acceptable	<input type="radio"/>
Inconvenient	<input type="radio"/>

2. The comments by speakers in the general sessions were:

Useful	<input type="radio"/>
Useless	<input type="radio"/>
Irrelevant	<input type="radio"/>

3. The workshops seemed to be:

Informative	<input type="radio"/>
Not Informative	<input type="radio"/>
Irrelevant	<input type="radio"/>

4. The workshop which will be most helpful to my business/organization was:

Workshops 1 & 2: The NASA TU Programs: An Overview	<input type="radio"/>
Workshop 3: Government Marketing & Procurement	<input type="radio"/>
Workshop 4: OMBE Marketing & Technical Assistance	<input type="radio"/>
Workshop 5: Private Sector Marketing & Procurement	<input type="radio"/>

5. The workshops were conducted so that I could get the information my business/organization needed:

Easily	<input type="radio"/>
Only if I kept asking questions	<input type="radio"/>
With great difficulty	<input type="radio"/>
Not at all	<input type="radio"/>

6. The staff and resource people in the workshops I attended were:

Well informed

☐

Not very well informed

☐

No better informed than I was

☐

7. I was able to meet with the NASA and OMBE representatives I wanted to see outside of scheduled meetings:

Easily

☐

Only if I kept asking for a meeting

☐

With great difficulty

☐

Not at all

☐

8. In my opinion, the seminar was planned:

Carefully

☐

Adequately

☐

Poorly

☐

COMMENTS

If you wish to make comments, please use the space below.

III SITE CONDITIONS/FACILITIES

The following questions will give you an opportunity to express your opinion of the seminar site. Your answers will enable the sponsors to arrange a better or different site for future seminars, if a change is desirable. Please mark an X in the box which best represents your opinion.

1. (Answer only if you made room reservations at the seminar site)

My room reservations were handled:

With no problems

☐

With minor problems

☐

At great inconvenience to me

☐

2. (Answer only if you had a room at the seminar site)

The room I stayed in was:

Unusually clean and comfortable

☐

About what I am used to

☐

Less clean & comfortable than
I am used to.

☐

3. The services provided by the motel staff at the seminar site were:

Unusually good

☐

Adequate

☐

Poor

☐

4. The seminar site was located in an area with services, shops, restaurants, etc., which provided:

Most of what I
wanted/needed

☐

Very little of what I
wanted/needed

☐

Nothing of what I
wanted/needed

☐

5. At the luncheons provided by the motel during the seminar, I found the food and service:

Better than what I am used to at motels

☐

About the same as most motels

☐

Unusually poor by comparison with other motels

☐

COMMENTS

If you wish to make comments, please use the space below.

TECHNOLOGY AND OPPORTUNITY
A NEW APPROACH FOR MINORITY BUSINESS

PARTICIPANT INTERVIEW

Participant Information

1. Participant Identification

a. Kind of business represented

_____ OR

b. Kind of organization/institution represented

2. Participant Identification (Optional)

a. Name _____

b. Business/organization _____

INTERVIEWER INSTRUCTIONS

Summarize the interviewee's response to each question in the space allowed. Question 4 is an occasion for the interviewee to comment on anything he chooses.

Allow no more than five (5) minutes for each interview.

INTERVIEW QUESTIONNAIRE

1. So far in the seminar, what have you learned that will be of specific and practical use to your business/organization?
2. In what way do you see NASA as a source of contracts or support for your business/organization?
3. What kind of assistance do you think your business/organization can get from OMBE-funded organizations?
4. Is there anything else you wish to comment on?

TECHNOLOGY AND OPPORTUNITY
A NEW APPROACH FOR MINORITY BUSINESS

OBSERVER QUESTIONNAIRE

OBSERVER INFORMATION

1. Observer identification

Name _____

2. Workshops attended

YES

NO

a. Workshop 1

☐☒

b. Workshop 2

☐☐

c. Workshop 3

☐☐

d. Workshop 4

☐☐

e. Workshop 5

☐☐

3. Other sessions attended

YES

NO

a. Introductory session, 6/4/74

☐☐

b. Lunch, 6/4/74

☐☐

c. General session, 6/5/74, 9:30

☐☐

d. Lunch, 6/5/74

☐☐

e. General session, 6/5/74, 1:30

☐☐

I. Achievement of Workshop Objectives

After each workshop you attend, please mark an X in the box which best expresses your opinion as to whether each stated objective was achieved. Feel free to make comments as you see fit in the space left for this purpose.

Workshops 1 and 2: The NASA TU Program: An Overview

Participant Objectives

- | | | |
|--|------------------------------|-----------------------------|
| 1. What the TU Program can mean to your business | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 2. Solving technological/production problems through the RDC | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 3. Gaining access to available patents through licensing | YES
<input type="radio"/> | NO
<input type="radio"/> |

Comments

Workshop 3: Government Marketing and Procurement

Participant Objectives

- | | | |
|---|------------------------------|-----------------------------|
| 4. How you can sell to NASA | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 5. How NASA develops sources and evaluates proposals | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 6. How to be responsive to NASA needs/RFP's, including pricing | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 7. What you need to know about NASA contracts and grants, including R and D opportunities | YES
<input type="radio"/> | NO
<input type="radio"/> |

Comments

Workshop 4: OMBE Marketing and Technical Assistance

Participant Objectives

- | | | | |
|----|---|------------------------------|-----------------------------|
| 8. | How you can utilize the marketing expertise and technical assistance provided by OMBE-funded organizations in your area | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 9. | Answering your questions on getting help from OMBE-funded organizations | YES
<input type="radio"/> | NO
<input type="radio"/> |

Comments

Workshop 5: Private Sector Marketing and Procurement

Participant Objectives

- | | | | |
|-----|--|------------------------------|-----------------------------|
| 10. | How majority corporations utilize NASA's TU System | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 11. | Subcontracting opportunities for you with majority firms | YES
<input type="radio"/> | NO
<input type="radio"/> |
| 12. | How to develop subcontracts with NASA prime contractors | YES
<input type="radio"/> | NO
<input type="radio"/> |

Comments

II. Seminar Management

Please mark an X in the box which best expresses your opinion of the effect on participants of the specific item described. Feel free to make comments as you see fit in the space left for this purpose.

1. The scheduling of general sessions and workshops was

Convenient

☐

Acceptable

☐

Inconvenient

☐

Comments

2. The comments by speakers in the introductory and general sessions were

Useful

☐

Useless

☐

Irrelevant

☐

Comments

3. The workshops seemed to be

Informative

☐

Not Informative

☐

Irrelevant

☐

Comments

4. If you were representing a business/organization,
the most helpful workshop would be

Workshops 1 and 2

☐

Workshop 3

☐

Workshop 4

☐

Workshop 5

☐

Comments

5. The workshops were conducted so that participants
could get information needed by their business/
organization

Easily

☐

Only if they
kept asking questions

☐

With great difficulty

☐

Not at all

☐

Comments

6. The staff and resource people in the workshops you
attended were

Well informed

☐

Not very well informed

☐

No better informed
than participants

☐

Comments

7. As far as you could tell, participants met with NASA and OMBE representatives they wanted to see outside scheduled meetings

Easily

☐

Only if they kept asking for a meeting

☐

With great difficulty

☐

Not at all

☐

Comments

8. In your opinion, the seminar was planned

Carefully

☐

Adequately

☐

Poorly

☐

Comments

APPENDIX G: LIST OF MATERIALS IN SEMINAR PACKETS

1. Program Agenda
2. NASA Materials
 - a. Selling to NASA
 - b. COSMIC
 - c. Technology Utilization - Program Report
 - d. NASA's Technology Utilization Program - Publications and Services Available to Industry
 - e. Listing of Special Publications Published by the NASA Technology Utilization Office
 - f. NASA Patent Abstracts Bibliography
 - g. Patent Licensing Regulations
 - h. 40 Billion Dollars of Research and Development Yours Free
 - i. Technology Utilization Program Response Form and Pre-paid Mailing Envelope
3. OMBE Materials
 - a. Progress Report - The Minority Business Enterprise Program, 1972
 - b. Funded Organizations, Fourth Edition

APPENDIX H:
ROSTER OF ATTENDEES

TECHNOLOGY TRANSFER SEMINAR

JUNE 4-5, 1974

SPONSORED BY NASA/OMBE

REGISTERED TUESDAY, JUNE 4, 1974

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Allen, Harrison	TU Eng.	NASA Lewis Research Cen. 21000 Brookpark Rd. Cleveland, Ohio	Government 216-433-4000
Armendaris, Alex	OMBE Dir.	Dept. of Commerce Washington, D.C.	Government
Buerbach, Maren	TU Spec.	NASA Facility 5001 Calvert Rd. College Park, Md.	Government 301-779-2121
Bainum, Peter	Prof. Aerosp.	Howard University Washington, D.C.	College 202-636-6607
Baxter, George	Vice Pres.	AG Beckert Co. 1019 19th St. N.W. Washington, D.C.	Investment banking 202-833-2478
Blackshear, Leonard	Ex. Dir.	CEDA 142 S. Stuart Annapolis, Md	Consulting 301-261-2278
Brett, V.P.	Sec.-Econ. Adm.	Martin Marietta Aerosp. P.O. Box 29304 New Orleans, La.	Aerospace 504-255-3633
Brown, L.	Editor	National Tech. Assoc. 3310 Ga. Ave. Washington, D.C.	Education Assoc. 202-882-3700
Carrey, Wayne	Div. Manager	Computer Science Corp. 8728 Colesville, Rd.	Information Sciences 301-589-1545
Carson, James	Patent Atty.	Haggins & Carson 526 Engineers Cleveland, Ohio	Patent Attorneys
Cason, Joseph	Ex. Dir.	Roanoke Valley Bus. Leag. 720 Fairfax Ave. NW Roanoke, Va.	Construction Contractor 342-8911
Clayton, Ralph	V.P.	Gainsboro Electrical 720 Fairfax Ave. N.W. Roanoke, Va.	Wire Harness Manuf. 345-2129
Countryside, Claryce	Bookkeeper	623 Waightown St. Winston-Salem, N.C.	919-784-7970
Crocker, Elvira	Editor	National Council of LaRaza 1025 15th St. N.W. Washington, D.C.	202-659-1251

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Cummins, Martin		NASA 600 Independence Ave. Washington, D.C.	Government
Dickey, Paul	Manager	IIT Research Inst. 10 W. 35th St. Chicago, Ill.	Research/Consulting 312-225-9630
Dixon, James	Asst. Pro. Man.	NASA 600 Independence Ave. Washington, D.C.	Government 202-755-2244
Dixon, Joseph	Priv. Procurement Officer	OMBE 1730 K St. N.W. Washington, D.C.	Government 202-634-7884
Duckett, Jasmin	Sec.	AM Machine Co. 1300 Curtain Ave. Baltimore, Md.	Precision Machine Shop 301-243-4872
Eckman, Sydney	Oper. Man.	International Eng. Serv. 3364 Susquehanna Rd. Dresher, Pa.	Contract Manpower 215-542-0112
Finch, Barbara	Pro. Man.	ETI 1701 N. Ft. Myer Dr. Arlington, D.C.	Professional Services 703-525-5818
Fisher, Miles	Ex. Sec.	National Assoc. for Equal Oppor. in Higher Ed. Washington, D.C.	Education 202-232-8500
Friedman, Don	Tech. Util. Of.	NASA Goddard Greenbelt, Md.	Government 301-982-6242
Gillespie, Ernest	Art Dir.	Logical Tech, Serv. 71 W. 23rd St. New York, N.Y.	Engineering 212-741-8340
Goldstone, N.J.	Supervisor	Rockwell Int. 12214 Lakewood Blv. Downey, Calif.	Aerospace 213-922-3998
Gottlieb, Sy	Corp. Man.	Rockwell Int. El Segundo, Calif.	Aerospace 213-647-5522
Griffith, Sally	Man. TU Ser.	NASA Facility 5001 Calvert Rd. College Park, Md.	Government 301-779-2121
Hamilton, Jeff	Director	NASA Washington, D.C.	Government 202-755-3040

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Marbin, Larry	Ex. Dir.	National Patent Law Assoc. 325 Penn. Ave. Washington, D.C.	Patent Lawyers 202-521-3366
Hayden, William		NASA	Government 202-755-7023 202-785-5133
Mayes, Junius	Ex. Dir. NABM	1625 I St. N.W. Washington, D.C.	
Lebert, R.E.	Oper. Mgr.	Aeroking P.O. Box 15330 Del City, Okla.	Aircraft Repair 405-672-4521
Hillman, James	Pro. Dir.	Unified Industries 205 S. Whitmg St. Alexandria, Va.	Engineering 703-751-8214
Hollander, Lynne	Recp./Sec.	ETI 1701 N. Ft. Myer Drive Arlington, Va.	Professional Services 703-525-5818
Johnson, Leon	Staff Consultant	ETI 1701 N. Ft. Myer Drive Arlington, Va.	Professional Services 703-525-5818
Koltaj, Elmer	Min. Source Coordinator	Sears 1633 Broadway New York, N.Y.	Gen. Merchandise 212-977-3966
Mubokawa, Chas.	Scientist	NASA, Ames Research Moffett Field, Calif.	Government 415-965-6044
Mawson, Richard	TU Spec.	NASA Facility 5001 Calvert Rd. College Park, Md.	Government 301-779-2121
Nettes, Theodore	OMBE Coordinator	OMBE Dept. of Commerce Washington, D.C.	Government 202-967-3165
Loury, Constance	Procurement Officer	UBDC 3231 Decatur Omaha, Neb.	558-2013
Jarks, Meyer	Sr. Elect. Eng.	Sears 3301 W. Arthialston St. Chicago, Ill.	Consumer Merchandise 312-265-3958

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Martin, Lawyer	President	ETI 1701 N. Ft. Myer Drive Arlington, Va. 703-525-5818	Professional Services
McNeill, Andrew	Owner	AM Machine Co. 1300 Curtain Ave. Baltimore, Md. 301-243-4872	Precision Machine Shop
Merritt, Donna	Sr. Staff Consultant	ETI 1701 N. Ft. Myer Dr. Arlington, D.C. 703-525-5818	Professional Services
Miller, Fred	President	Progress Aerospace Ent. Rabents & Stokley Strts. Philadelphia, Pa.	Electrical & Electronic Systems
Miller, Ted	Prog. Dev. Spec.	OMBE Dept. of Commerce Washington, D.C. 202-967-3237	Government
Monroe, Roscoe	Ass't. Dir., Equal Oppor. Prog.	NASA Hq. 400 Md. Ave. Washington, D.C. 202-755-8525	Government
Morris, Sam	Editor	USIA 1776 Penn. Ave. Washington, D.C.	Press
Mundy, James	EEO Coordinator	NASA/Goddard Greenbelt, Md. 301-982-2348	Government
Murray, Lonnie	Bus. Dev.	OMBE Dept. of Commerce Washington, D.C. 202-967-3165	Government
Nguyen, Nga	Admin. Asst.	Community Ent. Dev. Assoc. 142 South Street Annapolis, Md. 301-261-2278	Business Dev. Corp.
Norris, Myron	Vice Pres.	Logical Tech. Services 71 West 23rd St. New York, N.Y. 212-741-2340	Engineering

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
errick, D.W.		NASA Headquarters TU Office Washington, D.C. 202-755-3099	Government
arker, Gayle	Attorney	NASA	Government
Perez, Jose	Min. Bus. Ent. Specialist	NASA - JSC Houston, Texas 483-4831	Government
erry, Leon	Public Info.	NASA	Government
Phillips, Henry	President	Aeroking, Inc. P.O. Box 15330 Del City, Okla. 405-672-4521	Aircraft Repair
otter, T.R.	App. Eng.	NASA 919-549-8291	Government
osen, Eugene	Min. Bus. Officer	NASA Hq. 600 Independence Ave. S.W. Washington, D.C. 202-755-2288	Government
idley, Isaac		Va. State University Petersburg, Va. 526-5111 x.331	College
othstein, Alan	VP	Noise & Vibration Cont. Dulles Inter. Airport P.O. Box 17404 Washington, D.C. 703-471-8372	Acoustical Firm
anderson, Walter	President	Sanderson Industries	Metal Stamping
ohn Sequeira	Editor	ETI 1701 N. Ft. Myer Dr. Arlington, D.C. 703-525-5815	Professional Services
Sewall, Robert	Tech. Support Officer	OMBE 1730 K St. N.W. Washington, D.C. 202-634-7883	Government
mith, Elizabeth	Clerk	ETI 1701 N. Ft. Myer Dr. Arlington, Va. 703-525-5818	Professional Services

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Pann, Charlotte	Contract Spec.	NASA Washington, D.C. 202-755-3395	Government
Sprow, Renee	Marketing Spec.	OMBE 14th and Constitution Washington, D.C. 202-967-3456	Government
Sullivan, Gwen	Analyst	NASA Facility 5001 Calvert Rd. College Park, Md 301-779-2121	Government
Sword, Dan	Venture Mgr.	Rockwell International Los Angeles 213-923-1742	Aerospace
Terrill, Donald	Head, Eng. Dept	Noise & Vibration Control 710 Lesner Ave. Norfolk, Va. 804-480-2300	Noise Reduction
Thompson, Frank	Staff Designer	ETI 1701 N. Myer Drive Arlington, Va. 703-525-5818	Professional Services
Valdes, Ruben		NASA 600 Independence Ave. Washington, D.C.	Government
Walker, Conrad	Min. Bus. Spec.	NASA MSFC	Government
Watkins, Charles	Chairman Mech. Eng.	Howard University Washington, D.C. 202-636-6600	College
Wittaker, Gerald	Assoc. Dir.	Chicago Economic Dev. Corp. 162 N. State St. Chicago, Ill. 312-368-0011	Minority Bus. Dev.
Williams, Arthur	Deputy Dir., Govern. Prog.	OMBE 202-967-2865	Government
Volter, Arthur	Industry Asst. Officer	NASA/Goddard Greenbelt, Md. 301-982-5416	Government

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
De laValle, Robert	Cost Analyst	NASA/Goddard Greenbelt, Md. 301-982-4681	Government
Johnson, Barry		NABM 1625 I Street N.W. Washington	Government
Hynes, James		NASA 202-755-3870	Government
Champion, Jackson	Editor	Grass Roots News 907 6th St. S.W. Washington, D.C. 202-488-8787	Press Newspaper
Baker, Eugene	Dept. Director	National Assoc. of Black Manufacturers 1625 I Street N.W. Washington, D.C. 202-785-5133	Trade Association
Strong, Fred	President	Memphis Tubing Co. P.O. Box 9263 Memphis, Tenn. 901-774-3860	Steel Tube Fabrication

TECHNOLOGY TRANSFER SEMINAR

JUNE 4-5, 1974

SPONSORED BY NASA/OMBE

REGISTERED FOR FIRST TIME WEDNESDAY, JUNE 5, 1974

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Boyle, C.	Manager	NASA-Goddard Greenbelt, Md. 202-267-7523	Government
Browne, O.	Editor	Logical Technical Services 71 W. 23rd St. NYC, N.Y. 10010 212-741-8340	Engineering
Henderson, A. A., Jr.	Dir. of Marketing	National Assoc. of Minority Consultants and Urbanologists 1413 K St., N.W. Washington, D.C. 20005 202-347-4100	Consulting
Herring, W.N., Jr.	Research Assoc.	Urban Business Education Association 1625 I St. N. W., Suite 608 Washington, D.C. 20006 202-785-8211	Business, education, research
Hykes, R. N.	Director, Marketing	Business Resource Center 1129 20th Street, N.W. Washington, D.C. 20036 202-833-3077	Consulting and business development
Jenkins, H.	Secretary/VP	One America, Inc. 1330 Mass. Ave., N.W. Washington, D.C. 20005 202-628-2217	Consulting
Jones, H.M.	Regional Mgr.	United National Publishing Co. 450 E. Ohio St. Chicago, Illinois 312-266-7744	Press
McConnell, D.	Ass't Admin., Equal Op. Prog.	NASA 400 Maryland Ave., S.W. Washington, D.C. 202-755-2220	Government
Mogavero, L	Deputy Dir., TU	NASA 202-755-3074	Government
Taylor, C.	Marketing Rep.	One America, Inc. 1330 Mass. Ave., N.W. Suite 205 Washington, D.C. 202-628-2216	Consulting

NAME	POSITION TITLE	NAME, ADDRESS & TELEPHONE NO. OF AGENCY/COMPANY	NATURE OF BUSINESS
Vogel, L.W.	Director, Hq. Admin.	NASA 202-755-3706	Government
Voses, H.	Sales Director	United National Publishing Co. 450 E. Ohio St. Chicago, Illinois 312-266-7744	Press
Weaver, P.	Assoc. Director	Business Resource Center 1129 20th St., N.W. Washington, D.C. 202-833-3077	Minority Business Development